



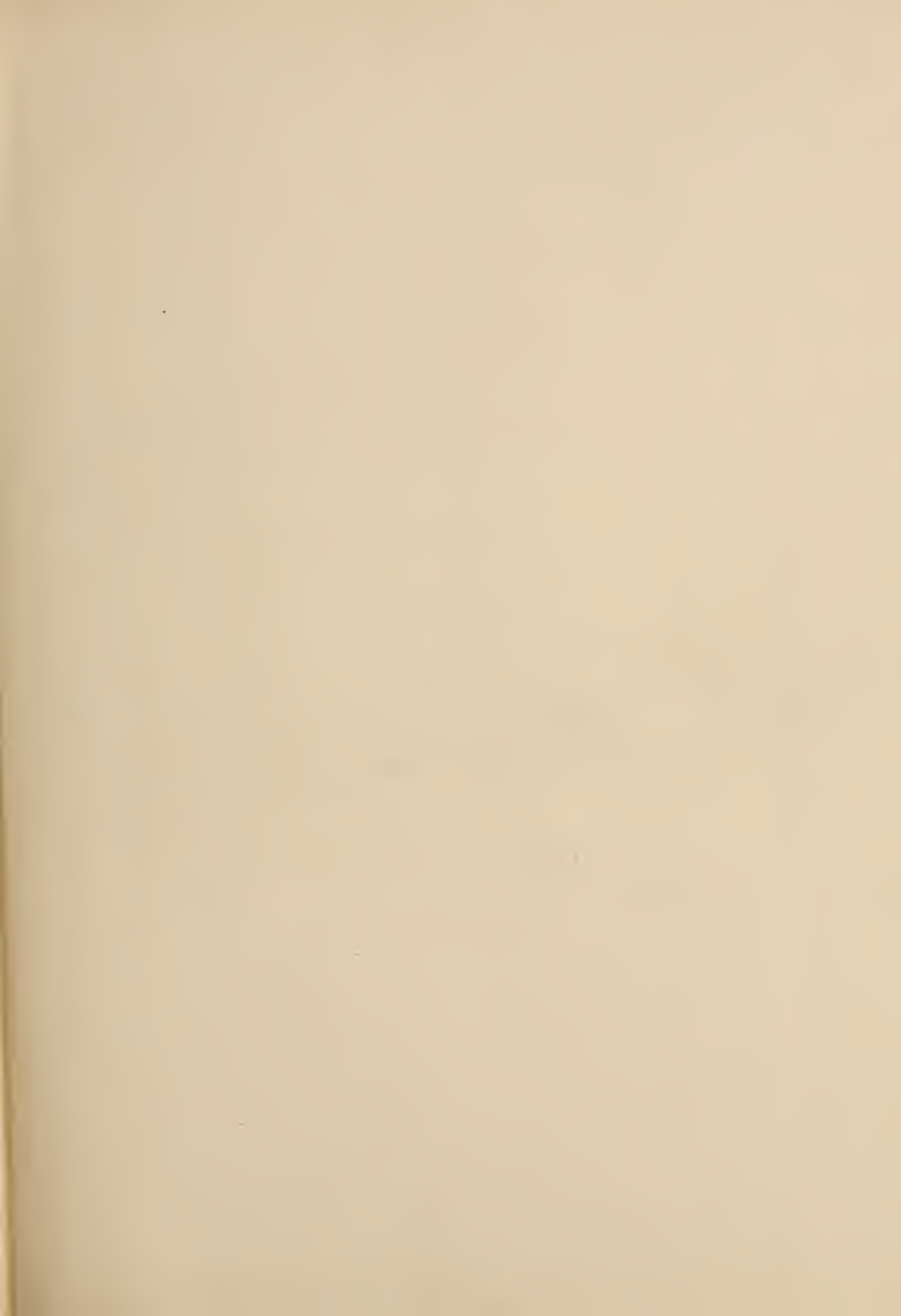
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# THE JOURNAL

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### CONTENTS

	PAGE		PAGE
Heart Block—Report of Cases.....	13	A Conception of Today's Relationship of Dentistry and Medicine .....	33
<i>E. W. Bitzer, M.D., Tampa.</i>		<i>A. F. Douglas, D.D.S., Chattahoochee.</i>	
Surgical Treatment of Duodenal Ulcer.....	16	Aneurism of the Thoracic Aorta—Case Report.....	35
<i>Ralph Gowdy, B.S., M.D., Miami.</i>		<i>Joseph H. Lucinian, M.D., Miami.</i>	
Use and Abuse of Blood Transfusion.....	21	Gall-Bladder Diseases .....	36
<i>W. W. Kirk, M.D., Jacksonville.</i>		<i>LeRoy A. Wylie, M.D., St. Petersburg.</i>	
A Consideration of Some Surgical Lesions of the Large Bowel .....	24	Editorials: (1) Some Points for Contributors to the Journal; (2) Doctors' Annual Registration.....	38
<i>Harry A. Peyton, M.D., F.A.C.S., Jacksonville.</i>		State News Items.....	39-50
Rumination or Merycism .....	31	Schedule of Meetings—Component Societies.....	41
<i>N. L. Spengler, M.D., Tampa.</i>			

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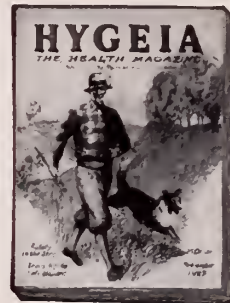
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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

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Number 1

## HEART BLOCK—REPORT OF CASES\*

E. W. BITZER, M.D.,

Tampa.

A voluminous literature has accumulated in recent years, concerning auriculo-ventricular conduction, due largely to the more general use of the electrocardiograph and the polygraph. The rapid development of graphic methods is one of the most interesting chapters of medical history. It has been said that usually a correct diagnosis can be made without the aid of electrocardiography in cases presenting arrhythmias, and undoubtedly this is true, but those who make this statement have acquired this skill through experience in working with graphic methods, and even they use electrocardiography to confirm the diagnosis. There are, however, a certain number of cases, in which a correct diagnosis can only be made by electrocardiography. It is largely to such studies that we owe our present knowledge of the subject of auriculo-ventricular heart block.

Disturbances of conduction in Tawara's node and the bundle of His may be congenital or acquired. Congenital heart block is a rare disease and is usually associated with intraventricular septal defects. Abbott<sup>1</sup> has collected from the literature sixteen cases. It may be partial or complete. Such cases are most frequently seen in infancy or childhood, and often are not characterized by a slow pulse rate.

In rare cases, functional disturbances of conduction have been reported. Such a case was reported by Meyer<sup>2</sup> in an athlete that was abolished by exercise and atropine.

Temporary disturbances in conduction are noted as a toxic effect following drugs of the digitalis group. It has been shown by Hashimoto<sup>3</sup> that histamin may have a similar effect. The effect of diphtheria toxin on conduction has been generally observed.

It has long been known that disturbances in conduction have been encountered as a terminal event and in asphyxia. Resnik and Lathrop<sup>4</sup> have noted similar changes associated with Cheyne-Stokes respiration. The writer observed

a case of partial block in a case of nephritis with uremia in which the grade of block seemed to fluctuate according to the blood urea nitrogen content. Transient disturbances due to trauma have been reported by White<sup>5</sup> and others. Taub<sup>6</sup> has reported a case with recovery following a grip infection.

The most frequently encountered types of heart block are the arteriosclerotic, syphilitic and rheumatic.

In arteriosclerotic cases, the lesion may be of gradual onset due to degenerative changes from an insufficient blood supply, or from embolism, or thrombosis. Willius<sup>7</sup> has reported two cases with infarction of the interventricular septum.

In syphilitic cases, the origin is through involvement of the arterial system. In rheumatic cases, the lesion may be inflammatory or embolic. Mahaim<sup>8</sup> has reported two cases showing infiltration or ulceration involving Tawara's node or the bundle, without arterial involvement.

The symptoms of heart block are Stokes-Adams syndrome and those of cardiac failure. Stokes-Adams syndrome is produced by periods of cardiac stand-still of varying duration. When they are of short duration only subjective feelings of discomfort and slight dizziness are produced, but when they are of longer duration, loss of consciousness and finally convulsive movements of the muscular system occur. There are many cases, however, that do not present such attacks. One of the peculiarities of heart block is the loss of the acceleration of the heart beat during exercise. This, coupled with the slow rate usually present, produces a peculiar type of cardiac failure which is independent of the congestive type of failure with which it is at times associated. There are cases that live in comparative comfort and lead active lives. There are others that are comfortable only when inactive.

On physical examination in heart block, one is usually able to make a diagnosis by the slow pulse, the discrepancy between the jugular pulsations and the radial pulse, or by the occurrence of dropped beats.

The association of other arrhythmias is frequently noted. Of these, the commonest is the association of premature beats, which may make

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

the diagnosis difficult without the aid of electrocardiography. The association of auricular fibrillation and block is not uncommon. Rarely encountered is the association of auricular flutter and heart block reported by Willius<sup>9</sup> in one case in 168 cases of auricular flutter.

Certain grades of block may develop in arrhythmias with rapid rates as a protective mechanism. Always some degree of block is present in fibrillation, as it is impossible for the ventricles to respond to all the auricular contractions. In flutter, a 2 to 1 block is frequently observed. A similar phenomena may be observed in auricular paroxysmal tachycardia.<sup>10</sup> Such cases as a rule do not represent organic lesions of the bundle.

The prognosis in heart block is necessarily poor, though there are cases that carry on limited activity and live in comfort for years. If Stokes-Adams syndrome is present, the prognosis is worse.

The treatment of heart block depends upon the presence or absence of Stokes-Adams syndrome. If Stokes-Adams syndrome is present, barium chloride or thyroid should be used between the attacks in an effort to prevent them, and adrenalin should be used for the attacks. In cases with complete block and without Stokes-Adams attacks, digitalis may be used when congestive failure is present.

#### CASE NO. 1.

M. McM. 1/22/27. American, age 18, single, is attending school.

*Family History.*—Father is living but at one time had tuberculosis of the lungs. One brother and one sister are dead of tuberculosis. Paternal grandfather is dead of tuberculosis.

*Past History.*—Scarlet fever with acute nephritis at 4 years of age. Had slight joint involvement at 8 years of age which has not recurred since the removal of the tonsils at 9 years. Was a blue baby at birth.

*Present Illness.*—All his life has complained of weakness, cyanosis, cough and shortness of breath after exercise.

*Examination.*—Normal in appearance, 5 ft. 8 in. in height, and weighs 133 pounds. Muscular development is fair, posture erect, teeth, gums, throat, mouth and thyroid are negative. The pupils are equal and active to light, the knee jerks are equal and active. The temperature is 98. The pulse is 55 and irregular. After hop-

ping 50 times, the rate is 84. Respiration 20, blood pressure 125/70. The abdomen is negative. The lungs are normal except poor expansion in both bases. The apex of the heart is in the fifth space  $7\frac{1}{2}$  cm. from the midline. The midclavicular line is  $7\frac{1}{2}$  cm. Substernal dullness at the second space is  $4\frac{1}{2}$  cm. There is a faint systolic murmur at the apex after exercise. The pulmonic second is split and accentuated.

Electrocardiograms show a rate of 50. Electric axis is plus 65 degrees. Normal Q. R. S. complexes and a complete auriculo-ventricular disassociation. The auricular rate is 64.

A seven-foot plate by Dr. Baldwin gave the following measurements. Great vessels 4.25 cm., heart shadow 12.25, int. diameter of chest 25.5 cm. It seems probable that this is a case of congenital heart block, though there is a possibility that it originated with the attack of rheumatism at eight years of age. Against this are the facts that he was a blue baby and his symptoms antedated the attack of rheumatism.

#### CASE NO. 2.

J. F. R., No. 1822, 4/28/25, age 62, male, white, American, married.

*Family History.*—Negative.

*Past History.*—Rheumatism, dysentery and malaria; denies venereal infections. Habits, excellent.

The chief complaint is dizziness of five months' duration, shortness of breath, swelling of ankles, and slight cough. For three years occasional epigastric pain.

*Physical Examination.*—Well nourished individual, 5 feet 6 inches, weighing 132 lbs. General appearance, normal. Teeth, mouth, throat and skin negative. Pupils, equal and active to light, knee jerks equal and active. Pulse 36, blood pressure 160/80. Kolmer, negative, urine normal. The heart is slightly enlarged. There is an increase in the substernal dullness. The radial arteries are moderately thickened. The lungs and abdomen are negative. There is a slight lateral curvature of the thoracic spine.

Electrocardiogram showed a 2 to 1 block. 12/18/25 electrocardiogram showed 2 to 1 and 3 to 1 block. During the remainder of this year the pulse varied from 30 to 42. During 1926 the pulse range was from 28 to 32. During this period he had several mild attacks of Adams-Stokes syndrome. On May 20, 1926, he reported that he was taking nine grains of barium chloride and four and one-half grains of thyroid daily.



The pulse was 30. He was having little dizziness and no fainting attacks.

*Final Diagnosis.*—Heart block, 2 to 1 and 3 to 1 block, arteriosclerotic heart disease.

#### CASE No. 3.

E. G. M., 8/1/27. American, male, age 87, retired physician, widower, four children.

*Family History.*—Negative.

*Past History.*—Scarlet fever at 22 yrs. of age. No venereal infections. Has had radium for an epithelioma of the lip. Habits are excellent.

*Present Illness.*—Has been short of breath after exercise for three years. He has dizzy attacks but these are relieved by laxatives. The memory is very poor. His pulse has been under 50 per minute for the last three years.

*Examination.*—He is a fairly well nourished individual, 5 feet 11 inches in height, weighing 160 pounds, senile, white hair, but remarkably vigorous looking for his age. The teeth are false, and the gums, throat and thyroid are negative. The pupils react to light and there is a beginning cataract of the right eye. The knee jerks are absent. The temperature is 98, pulse 44 and slightly irregular. Respiration 24, blood pressure, right arm 190/80, left 190/80. The right ankle is slightly edematous. The radial arteries are thick and beaded and the brachials and temporals are thick and tortuous. The dorsalis pedis is pulsating in both feet. There are numerous varicose veins in both legs. The abdomen is negative, and there are a few moist rales in the posterior base of the right lung. The left border of the heart is 10½ cm. from the midline, the right is 4 cm. Transverse dullness at the second space is increased 8½ cm. The mid-clavicular line is 8 cm. The pulmonic second is greater than the aortic second and both show a phasic splitting. The urine shows a 2 plus albumin, 2 plus pus and 2 plus casts. The blood urea nitrogen is 25, uric acid 6.3, sugar 118, and CO<sub>2</sub> combining power 29%.

Electrocardiograms show auricular fibrillation and a complete heart block with a deviation of the electrical axis to the left.

A seven-foot heart plate by Dr. Robert Baldwin showed the following measurements: great vessels 7.5 cm., transverse heart 14 cm., int. diameter of chest 29 cm.

Atropine was used to rule out functional block but did not influence the pulse rate. He has been continuously, except for short periods, on 3 grs.

of thyroid daily and his pulse rate has been as high as 60 per minute. He has been on a low proteid and low salt diet and his blood pressure is running around 150 systolic.

*Conclusions.*—Complete heart block associated with auricular fibrillation and left ventricular premature beats, chronic nephritis with moderate hypertension, marked arteriosclerosis.

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#### DISCUSSION.

*Dr. Herrman Harris, Jacksonville:*

I wish to express my appreciation of Dr. Bitzer's excellent paper. Little can be added to what he has told us about the etiology and diagnosis of this condition.

One fact might be mentioned here. Heart block is a serious affection but is not always fatal. Some cases seem to completely recover. I have a case in private practice which had complete heart block fifteen years ago with frequent Adams-Stokes syndrome. I have observed ventricular stand still for three minutes in this patient, the seizure terminating with convulsions. This case gave repeatedly negative Wassermanns, notwithstanding this iodides and other antileptic treatment was given. He has apparently entirely recovered, for a careful check with electrocardiographic tracings over a period of ten years has shown a normal rhythm.

In reviewing the few cases of heart block that I have seen, syphilis seems to be the most potent factor in its production.

Since we have been electrocardiographing our heart patients, widening of the P. R. interval and delays in interventricular conduction has been

found much more frequently than had previously been suspected.

The action of digitalis in producing heart block of various grades must not be overlooked.

*Dr. Bitzer (closing):*

I quite agree with Dr. Harris in his statement that heart block is not necessarily so serious. In the first case I reported this young boy was seventeen; and at the present time is able to do considerable manual labor without any discomfort at all. He is now in college and indulges mildly in some athletic sports.

I think the cases of Stokes-Adams syndrome are usually more serious; in the first place they are likely to reach a lower pulse rate and it often becomes a total cardiac standstill. Undoubtedly, there are certain cases of luetic block that do respond to treatment, but often the results are disappointing.

An increase in the P. R. interval does not necessarily mean clinical heart block. I have seen many cases of that type which, as far as I know, never reach the stage of dropped beats. My impression of this problem is that a certain number of cases showing delayed conduction eventually show dropped beats or develop block of various degrees.

## SURGICAL TREATMENT OF DUODENAL ULCER\*

RALPH GOWDY, B.S., M.D.,  
Miami.

The more different operative procedures in use among surgeons for a given condition, the more proof we have that none of the operations have proven entirely successful.

Dr. Lahey of Boston states that he does not know of any situation in surgery, so completely mixed up, as surgery of gastric and duodenal ulcers. In this paper duodenal ulcers only will be considered although some hold that both conditions require the same operative treatment.

In nearly every case of duodenal ulcer there is either spasm of the pyloric muscle or greatly increased action of the muscle. Along with this condition is a state of increased peristalsis of the stomach. With hyperperistalsis we usually find hyperacidity. The spasm of the pylorus must interfere with the blood supply to the mucosa of

the upper duodenum. Especially so since the blood vessels in this area mostly run parallel to the duodenum. This interference in blood supply probably decreases the alkaline secretion which is normally found in pylorus and duodenum. The pylorospasm also prevents the regurgitation of alkaline bile and pancreatic juice to this region. Devene and Reese both feel that pylorospasm is probably the primary cause of duodenal ulcer. Disturbance in function of the sympathetic nerves probably cause pylorospasm. This combination of conditions most likely caused the first ulcer and unless corrected will keep it from healing, or may produce another. Trophic ulcer may be found with a low acidity. These have a separate etiology and are cured by resection of ulcer. Focal infection, I believe, is a contributory cause of duodenal ulcer and should always be looked for.

To cure duodenal ulcers and prevent more ulcers from forming we must either relieve the tissues, in this region, from the influences which cause the ulcer or remove the tissue subject to ulcer. This may be done in different ways.

Before taking up the different surgical procedures most used we must decide which duodenal ulcer cases should be treated by surgery. It is quite generally agreed that medical treatment should have a good trial before resorting to surgery, unless perforation or an obstruction has already occurred. Just how long medical treatment should be continued without marked benefit is a question. Some internists are of the opinion that a well-defined duodenal ulcer of long standing is never permanently cured by medical care. In the Mayo Clinic papers of 1926 Alvarez states he is not sure that a person with chronic duodenal ulcer is ever permanently cured by medical treatment. People with chronic duodenal ulcer often become impatient with medical treatment and ask that surgery be tried. Under medical care, a restricted diet over a long period becomes boresome to these people and they seek a more rapid method of cure. If medical treatment does not give relief of pain and marked improvement within one month, I believe surgery is indicated. After several months of medical treatment if the ulcer symptoms return, upon trying an unrestricted diet, surgery is indicated. If repeated hemorrhages have occurred over a period of several months, surgery is called for. It may be necessary in these cases to give a blood transfusion before operating. We do not feel

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that one severe hemorrhage is an indication for immediate surgery. Nearly all cases will recover from the first hemorrhage under medical care. Surgery during an acute hemorrhage, with shock is a dangerous procedure and is seldom required. If done at this time blood transfusion before or immediately after operation is important. All duodenal ulcers with marked obstruction are surgical cases. All perforated duodenal ulcers should be treated surgically and should be operated on during the first six hours after perforation if possible. Most cases will recover if operated within six hours after perforation, while very few will recover if not operated on within twenty-four hours after perforation.

It is possible that some day a medical treatment will be found which will make surgery seldom necessary, but at present there is a large percentage of duodenal ulcer cases that are best treated by surgery.

When surgery has been decided on, the type of operation must largely be determined by the conditions found. For the past ten years gastrojejunostomy with its modifications has been the operation of choice. At first gastroenterostomy was followed so frequently by complications, such as vicious circle type of vomiting, poorly functioning stoma or gastrojejunal ulcer, at site of anastomosis, that changes in technic and suture material were tried. The vicious circle type of vomiting was largely eliminated and a reduction of the percentage of gastrojejunal ulcers, by one-half, was accomplished. Still in perhaps ten per cent of cases a secondary ulcer will form at the anastomosis. In some clinics the percentage is given as five per cent, in others as twenty-five per cent; most likely, ten per cent would be a better average. When gastrojejunal ulcer is complicated by a fistula into the transverse colon a very serious surgical repair job is found. Because of these gastrojejunal ulcers different operative procedures are being tried out in hopes of finding one that will prove satisfactory in a greater percentage of cases.

Excision of the ulcer and splitting of the pylorus with suturing in opposite direction was tried, but the tone of the muscle soon returned and produced a narrowing of the pylorus with a return of trouble. Resection of the pylorus along with the ulcer and then doing a gastroduodenostomy gave good results but the operative mortality was too high. Billroth's first operation in which a partial gastrectomy was done and the

stump of the duodenum attached to the lower angle of the resected stump of the stomach was not widely used because it was hard to prevent leakage at the anastomosis and obstruction was likely to follow. Dr. Horsley of Richmond sometimes does a partial gastric resection and closes similar to Billroth's first operation but attaches the duodenal stump to the upper angle of the stomach and in some cases splits the duodenum on the anterior wall to widen it. This operation may prove to be a good one and is worth keeping in mind.

Finney devised a duodenal pyloroplasty which seems to be a good procedure. The operation is difficult in the presence of adhesions and some have found that the stomach does not empty well after this operation, probably due to adhesions which have formed. The pyloric opening is large and free but it may be that adhesions to adjacent organs interfere with peristalsis more than with some other procedures. Finney has had good results with this operation.

Among American surgeons today gastroenterostomy is the most widely used operation for duodenal ulcer, but in Europe partial gastric resection with gastroenterostomy is being widely used. Dr. Lewisohn of New York is a strong advocate of the partial resection and gastroenterostomy. He maintains that it removes the cause for recurrent ulcer by lowering the acid producing area of the stomach. Other surgeons do not feel so enthused over such a radical operation. Dr. C. H. Mayo states he would not allow such an extensive operation on him, for duodenal ulcer, until other methods had failed. He mentions three cases of marginal ulcer at anastomosis after partial gastrectomy which he observed in a short space of time. This tends to show that it is no proof against secondary ulcers. Dr. Crile feels that partial gastrectomy should only be used after other surgical methods have failed. Dr. John Gilbride of Philadelphia states that routine partial gastrectomy for duodenal ulcer is unphysiologic and unsurgical. It seems that certain people will develop recurrent ulcers after any type of operation so far devised. Therefore, a simple operation which gives as good results as to relief of symptoms and as to the number of recurrent ulcers is best, especially if it leaves the gastrointestinal tract in the nearest normal arrangement possible.

During the past few years Dr. Judd of the Mayo clinic has been doing an operation for

duodenal ulcer in which the ulcer and anterior wall of upper duodenum and anterior half of pyloric sphincter is resected. Then the cut surfaces of stomach and duodenum are brought together similar to the closure of the last part of a gastroenterostomy. Most ulcers occur in the anterior superior wall of the duodenum close to the pyloric sphincter. By resection of the anterior wall of the upper part of the duodenum and the pyloric sphincter action of pylorus is destroyed. If there are any ulcers on the posterior wall they can be treated by cautery or excision before closing. This operation is not so difficult as removing a complete section of duodenum and pylorus. It leaves a more normal arrangement than gastroenterostomy or partial gastrectomy and gastroenterostomy. It seems to leave a more normal functioning stomach and duodenum than Finney's pyloroplasty. Secondary ulcers if they should form are not so difficult to deal with as they are after the other operations mentioned. From Judd's experience there seems to be the smallest number of unfavorable results following this operation of any yet devised. If I were suffering with duodenal ulcer which did not respond to medical treatment, I would sooner have this operation performed on me than any other that I know, provided, conditions permitted this operation.

This operation cannot be done safely if there is cord-like induration of the upper part of the duodenum or extensive adhesions and distortion of the upper part of the duodenum. It is especially applicable to young people who have had hemorrhage or in older people who have had repeated hemorrhages. Subsequent hemorrhage is less likely after this operation than after gastroenterostomy. It seems to be the most reasonable process yet devised as it leaves the stomach and duodenum in nearly normal arrangement excepting the loss of function of the pyloric sphincter. Destroying the sphincter action allows bile and pancreatic juice to reach the ulcer bearing region more freely, especially at night and between meals, which I believe will help to reduce recurrent ulcers. Food passing down the duodenum past the opening of common bile duct and pancreatic duct will be mixed more normally with these digestive juices than after any of the other operations now in general use. Some might say simple removal of the ulcer and closure or removal of ulcer and splitting the pyloric sphincter is sufficient, but past experience has proved it unsatisfactory, especially if the ulcer is large

or more than one ulcer is found. There are many cases in which gastroenterostomy will be required because of contra-indications to other operative procedures. It should be stated here that a diseased appendix or gall-bladder should be treated at the same time the ulcer is treated provided the patient's condition will permit.

I wish to show three sets of X-ray plates in connection with this operation. The first set was made just before operation. As you will see there is a marked pylorospasm and an ulcer in the duodenal cap. In this case at operation we found an indurated ulcer on the anterior superior wall of the duodenum about two-thirds inch below the pyloric sphincter. The pyloric sphincter can be located by two veins, one above and one below, which nearly meet over the sphincter. The pylorus was opened proximal to the sphincter by a transverse incision one and one-half inches long. This allows internal exploration of the duodenum. The ulcer was found to be bleeding slowly. No other ulcer could be found. Next another incision one inch long was made transverse to the duodenum just below the ulcer. The ends of the transverse incisions were connected by two incisions made in such a way as to remove the ulcer and the anterior half of the pyloric sphincter. To give the smoothest closure this rectangular piece of tissue should be widest at its center. Closure is obtained by bringing the cut edge of the pylorus to the cut edge of the duodenum and suturing similar to the last half of a gastroenterostomy closure. Nine weeks after operation X-ray plates show no pyloric sphincter action. The duodenum is open and the barium passes through freely. The six-hour plates show the stomach to be entirely empty. The plates taken five months after operation show total absence of constriction at the pyloric sphincter and the barium passes through freely. Six-hour plates show complete emptying of the stomach within six hours.

I also wish to show X-ray plates of a duodenal condition not suited to Judd's type of pyloroplasty. This is a case of chronic duodenal stasis of the third portion and diverticula of the first portion which simulated ulcer by X-ray. The clinical findings were not those of ulcer. The first plates were taken before operation and show deformity of the duodenal cap. One plate shows a bulging on the anterior inferior side which was a diverticula. Obstruction of the third portion is caused by the superior mesenteric vessels press-

ing on the duodenum which prevented the barium passing freely past this point. There is a marked distention of the duodenum proximal to this point. Gastroenterostomy and repair of one diverticula was done at operation. The gall-bladder was also abnormal and was removed. The next X-ray films were made six months after operation and show a well-functioning stoma with very little barium in the duodenum. The last X-ray films were taken fifteen months after operation and show the same findings as those taken six months after operation. This case is mentioned and the plates shown to keep before us the importance of gastroenterostomy in conditions in which pyloroplasty is not indicated.

In the January issue of *Archives of Surgery* Dr. Isaac Y. Olch shows the importance of duodenal regurgitation of bile and pancreatic juice into the stomach. Neutralization of the gastric acidity by the regurgitating fluid is an important part of digestion. Pyloroplasty which destroys the pyloric sphincter action allows this process to take place freely and will do much to prevent recurrent ulcers. Since resection of the ulcer and part of the pyloric sphincter does this and at the same time leaves the gastrointestinal tract in the nearest normal arrangement of any operation which has proven successful, I feel that it is the operation of choice when conditions permit its use.

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#### DISCUSSION

*Dr. John S. Helms, Tampa:*

I am sorry I did not hear all of Dr. Gowdy's paper. This paper I believe is confined to the discussion of duodenal ulcer, exclusive of stomach ulcer. The question of treatment of duodenal ulcer has been the battle ground between the internists and surgeons for a long time.

To determine the type of duodenal ulcer, which should be operated upon without delay and the type which should be given medical treatment is often a difficult problem. A distinguished surgeon has facetiously stated that he treats surgically those ulcers which have been cured nine times medically.

I feel that in certain types of duodenal ulcer medical treatment should always be tried out before surgery is resorted to. I feel, however, that the perforating type and those that have perforated, bleeding ulcers and ulcers with obstruction, either from intrinsic or extrinsic causes such as periduodenal lesions, should be operated upon without further delay, except those, perhaps, which are bleeding, should be given time for such treatment as may be necessary to fit them for surgery. All other ulcers of the duodenum should be treated medically until we are satisfied they will not be cured.

Personally, I do not feel that medical treatment of duodenal ulcers will effect a cure. I am convinced, from a considerable experience, that all types of duodenal ulcer should finally come to surgical operation and that upon surgery will rest the final cure.

As to the type of operation, which should be done, the preference should be gastroenterostomy in the obstructive type. Posterior gastroenterostomy with no loop is the operation of choice. The more complete the obstruction the more perfect will be the cure.

For ulcer in which there is no obstruction, such as bleeding ulcers and others, some form of pyloroplasty with excision of ulcer should be done. In cases where the duodenum can be easily mobilized, Finney's operation may be done. In cases where the ulcer extends no further than three-fourths of an inch distal to the pyloric sphincter, Horsley's operation may be done. In cases where mobilization is impossible, Judd's operation may be done. The operation must be suited to the situation found to be present in the individual case. I do not feel that pylorotomy or partial gastrectomy has a place in the treatment of duodenal ulcer.

Finally it is my opinion that there is no field of surgery in which the final results are more satisfactory than surgery for duodenal ulcer, when the diagnosis is accurate and good judgment used as to the type of operation to be done.

*Dr. John Elliott Boyd, Jacksonville:*

The fact that "a given treatment" fails to cure all cases or that a cure is followed by a recurrence in some cases does not discredit the treatment.

If the inference by the writer as to pylorospasm being the cause of some duodenal ulcers be true, then it seems to me that Finney's pyloroplasty would be the ideal operation in those cases.



I am not entirely in accord with the statement relative to the indication given for surgical treatment. There is, I feel, only one type of duodenal ulcer which should be treated medically and that is the clinically proved *recent* ulcer. Medical treatment is a waste of time in chronic duodenal ulcer except as a postoperative measure.

Relative to active hemorrhage immediate operation is contraindicated. Blood transfusion will control the bleeding in practically all cases. However, a second hemorrhage should not be allowed to occur and the proper safeguard against that is an operation at the earliest date justified by the patient's condition.

Judd says: "The argument that partial gastrectomy obviates the possibility of subsequent ulceration is not absolutely sound, since secondary ulceration may and does occur after partial gastrectomy." He further says: "Since the recurrences of ulceration after posterior gastroenterostomy is only 2 per cent a routine, partial gastrectomy is hardly justifiable to prevent such a slight disability."

I have no experience with the Judd operation designated by Dr. Gowdy, but frankly can see no reason why it has any advantage over pyloroplasty.

I wish to emphasize one point—no matter what operation is done, "*destroy the ulcer if it's possible.*"

The statement by Dr. Gowdy that "The type of operation is determined by the condition" voices my position regarding the surgical treatment of duodenal ulcers. The undue enthusiasm as to partial gastrectomy seems to me a reckless disregard for human life. When these surgeons try to make you believe that the mortality is very slightly increased over the simpler types of operations they are asking a great deal.

*Dr. Cayetano Pauetiere, Miami Beach:*

I should like to say a word in favor of the Finney pyloroplasty. It was my privilege to work with and follow up these cases of Dr. Finney. The operation in itself, under proper training, is not a formidable one, hence there is little, if any, postoperative shock. The convalescence is strikingly uneventful. It is my opinion that every case has to be judged by itself; there is no universal technique, but in selected cases the Finney pyloroplasty seems to fulfill most of the requirements for satisfactory surgery of ulcers. It allows us to excise the ulcer, it puts the pylorus

out of commission (without which little hope can be entertained for the disappearance of symptoms) and reestablishes to a large extent the normal arrangement of the gastrointestinal tract. The gastroduodenostomy of Dr. Judd appears to be an excellent operation, but I have not had enough experience with it to offer any statements.

*Dr. Ralph Gowdy, (closing):*

I appreciate the discussions very much.

Dr. Helms mentioned the fact that in certain cases of duodenal ulcer Judd's type of pyloroplasty cannot be used because of the extensive adhesions which prevents mobilization of the pylorus and upper duodenum. Even in these cases Dr. Judd is using this operation more often than formerly, with good results.

Dr. Boyd feels that ten per cent of unfavorable results in gastroenterostomy is rather high. I believe the most recent findings of the different clinics, given unfavorable results in five to thirty-five per cent of cases, therefore I felt ten per cent would be more nearly correct than either extreme. Gastroenterostomy without resection has been very widely used during the past few years, but today it is being discarded in many clinics and the whole surgical aspect of gastric and duodenal ulcer is being discussed. This indicates that gastroenterostomy has been found wanting. It will still be used in many cases in which other operations cannot be successfully used.

Dr. Panettiere mentioned Finney's pyloroplasty. This has proved to be a good operation and gets away from some of the bad results of gastroenterostomy. I believe it is more difficult to do in the presence of duodenal adhesions than Judd's type of pyloroplasty.

I think we all agree that in nearly all cases of duodenal ulcer, medical treatment should be tried before resorting to surgery, but in this paper we are only taking up the different surgical treatments, in an attempt to stimulate interest in this very important field of surgery.

Last week I received a letter from Dr. Judd in reply to my request for his recent experience with resection of part of pyloric sphincter, along with the ulcer and closure as I have already described. His reply is as follows: "I am very glad to say that resection of part of the pyloric sphincter with the duodenal ulcer has worked out very well. The more experience we have with the

operation the more we feel that it is the procedure in cases in which it can be carried out. Unfortunately its use is limited.

"If the lesion has perforated and the duodenum is bound down it may be inadvisable to do the amount of dissecting necessary to liberate it. However, we are doing the operation in more of these cases than formerly, and the results have been very satisfactory.

"I think we all feel that gastroenterostomy would be the operation of choice in all cases of duodenal ulcer if we could be sure that jejunal ulcer would not develop, but, on account of the occurrence of ulcer near the stoma in certain gastroenterostomized patients we prefer to avoid gastroenterostomy whenever possible.

"Personally, I cannot believe that removal of the pyloric part of the stomach with the lesser curvature is going to be the answer to the problem of surgery for duodenal ulcer. In quite a number of instances in which this procedure has been carried out, secondary ulcers have occurred in the jejunum just as following gastroenterostomy."

## USE AND ABUSE OF BLOOD TRANSFUSION\*

W. W. KIRK, M.D.,  
Jacksonville.

### *Introduction.*

There is no one in active practice who does not have the problem of blood transfusion confronting him from time to time, whether he wills it or not. With this thought in mind it is opportune to discuss the rather narrowly limited subject of indication and contraindication, and a rather current abuse of blood transfusion.

We all know something of the history of blood transfusion; it has been in vogue and out of style since earliest time, and it has been almost epidemic in practice at times. It is not the purpose of this paper to discuss the determination of blood type, nor the technique of blood compatibility, nor to burden you with any of the other details of the management of the problem properly referable to the laboratory clinician.

### *Methods Used.*

As a foundation for the discussion it will be necessary to briefly outline the methods used for blood transfusion.

Blood may be given modified or unmodified. The use of modified blood implies addition of anticoagulant drugs (most frequently sodium citrate) to the blood prior to injection; while donation of unmodified blood implies transfer of the blood from donor to patient either by the direct route of blood vessel anastomosis or by use of apparatus such as the Unger transfusion apparatus or Kimpton Brown tube. My personal preference is for use of the Unger method.

Vessel anastomosis is practically obsolete and the use of modified blood is rapidly and deservedly falling into disrepute.

### *Indications and Contraindications.*

The one imperative and positive indication for transfusion is exsanguination from any cause, particularly from accidental injury, ruptured uterus, ruptured ectopic, melena neonatorum and umbilical hemorrhage in infants, hemorrhage from any mucous surface, particularly gastric or intestinal. Blood is our one best hemostatic. Death in hemorrhage is due in large part to oxygen starvation of the tissue cells, successful transfusion supplies the vital requirement.

Transfusion is a valuable asset before, during, or after serious major operations, such as removal of toxic goitres, hysterectomies, cholecystectomies, nephrectomy, resection of stomach and intestines, major amputations, especially in patients past middle age in whom shock and excessive blood loss are liable. True secondary anemia with hemoglobin below forty and red count below two and a half million are definitely improved by transfusion.

We have all seen the patient for whom everything possible has been done, who still does not properly convalesce after operation or other treatment. Too often, for unaccountable reasons, the situation is out of our control, but in some instances blood transfusion will work the miracle to keep the patient alive long enough to mobilize his defenses and recover.

Possible or experimental indications include a wide variety of conditions. The true merit of transfusion in these instances can only be learned as data accumulate. These conditions include surgical shock, acute, subacute and chronic infection, erysipelas, severe burns, blood dyscrasias, especially primary progressive or pernicious anemia, purpura, hemophilia, drug and chemical poisoning, especially carbon monoxide poisoning, nephritis with impending uremia and malnutrition states.

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Proper transfusion is but a part of good treatment; if in doubt transfuse rather than wait. Transfusions are by no means free of danger and must not be taken lightly. Wholesale transfusions in miscellaneous diseases are to be condemned.

Transfusions in acidosis, mild secondary anemia, many bacillary infections, acute exanthems, typhoid (except for hemorrhage), tuberculosis of lungs, pneumonia, patients with extremely high blood pressure or badly decompensated cardiac lesions are usually either positively dangerous or useless. Transfusions permissible experimentally as above listed are condemned by many, especially in cases of acute sepsis and burns.

#### *Results From Transfusions.*

The results obtained from blood transfusion may vary from being absolutely miracle-working in their brilliance to positively death dealing in consequence.

We have all seen the results of the successfully given transfusion, characterized by the almost immediate improvement of the patient's color, respiration and pulse, the cessation of hemorrhage, the revival of the patient's spirits and morale, and the ability of the patient to respond to routine treatment for his condition.

Examination transfusion and immuno transfusion have been experimentally successful.

Discussion of some of the more unfortunate results of the transfusion is less gratifying but more important. The so called reaction due to transfusion always comes in for a lot of discussion whenever the question of transfusion arises. I feel that the dangers of the reaction have been greatly exaggerated. When we give diphtheria antitoxin we expect febrile rise, discomfort, and even a chill or severe anaphylaxis in our patient, yet few of us pay any real concern to this reaction, going right on with the antitoxin administration. We must adopt somewhat the same attitude with regard to the reaction following transfusion. The transfusion is needed regardless of reaction. With the improvement of technique the severe reaction characterized by high fever, prolonged chill, threatened respiratory and circulatory collapse is becoming relatively rare. Most reactions can be adequately handled by external heat application, morphin and atropin. If a patient is too low to stand a possible reaction he is so near moribund that even transfusion will not save him except in the rarest of

instances. I am of the personal opinion that almost all of the major reactions are due to one or more of the following causes: incompatible blood, the use of citrated blood, lack of scrupulous surgical cleanliness of the apparatus used, unusual delay in completing the transfusion, which may have a number of causes, but too often may be laid to clumsiness and inexperience on the part of the operator. We must remember that even the most compatible of bloods will clot before ever being used if these two latter factors come into play. Reactions will usually occur within twenty-four hours after transfusion. If death occurs within an hour after transfusion the operation itself can be blamed.

Mention should be made of the dangers which threaten in any transfusion. Any sudden change in the patient calls for a halt and immediate investigation. This change will most frequently manifest itself by sudden restlessness, sense of extreme oppression or suffocation, persistent cough, sense of extreme heat, cyanosis, sudden abnormal blood pressure rise, or sudden chill. Occurrence of sharp lancinating pain in the patient's arm during the course of transfusion usually means that the donated blood is not properly entering the vein and necessitates a new start. The formation of a clot in the apparatus usually necessitates conclusion of the operation, if the best interests of the patient are to be regarded. Blood is toxic in direct proportion to the chemical alterations to ward coagulation and this toxicity begins to develop in the invisible preclot stage. Air embolism, over-elevation of blood pressure, acute cardiac failure are rare and their danger often exaggerated, but must be kept in mind.

As for concrete facts as to results in blood transfusion: the average dosage is 400 to 500 c.c. for the adult, for infants and children 10 c.c. per kilogram should be employed. The hemoglobin after these doses rises variably from 5 to 10 per cent and the red count increases about 500,000. The life of the transfused red cells is variable but probably is several weeks. As much good will arise from stimulation of the blood-forming organs in many instances as will arise from the actual increase of the red cells. The only satisfactory guide to the amount of blood given and frequency of transfusions is the actual check upon the patient as made by hemoglobin estimations and cell counts, coupled with observation of the clinical condition of the patient.

*The Abuse of Transfusion.*

I am frankly a strong advocate of transfusion when indicated and skillfully given. Otherwise I would rather see the patient die than go through one. The sooner transfusion is looked upon as something other than a last resort, the sooner experimentation with transfusion in all sorts of miscellaneous diseases without real indication is stopped, the sooner the ones who so bitterly assail transfusion will delegate the transfusion to a specially trained "transfusion team," the sooner the citrate method of blood transfusion is abandoned, the sooner indiscriminate use of the universal donor is stopped, and the sooner a rational speedy technique is adopted the sooner will many desperately and hopelessly lost patients have their chance at life. It must require an unusual amount of courage for some men to turn their patients over to another for transfusion. Transfusions have been mismanaged in hospitals all over the land and the situation tolerated in many; the same operator conducting a nephrectomy or cystectomy with as poor technique would have immediately been in danger of losing his operation privileges. I have seen the effort at transfusion consume two hours or more, the donor losing 500 c.c. of blood and the patient getting none. No transfusion of other than extreme difficulty should require more than thirty minutes, the average time would be near twenty. In 1923 in Mt. Sinai Hospital in New York City reactions in blood transfusion were 36% less than in 1922, the result of simply taking transfusions out of the hands of inexperienced men. We must look upon transfusion as a major procedure; we are handling the most complicated fluid known; we have the life of usually the poorest sort of risk in the balance and the odds are usually all against us. None but the best of every resource available will satisfy.

*Conclusion.*

Blood transfusion is not viewed in the right light by many of the profession. The attitude of many is to ignore its existence entirely or use it only for the practically moribund patient. If any stimulation to careful investigation of the problem of blood transfusion has been given, or if any discontinuance of the abuse of transfusion may be caused by the presenting of this paper I will feel much rewarded.

**DISCUSSION.**

*Dr. J. Raymond Graves, Miami:*

The subject of blood transfusion is something we have been interested in since we were in med-

ical school, and have had quite a bit of experience both during our internship and, since, in private duty practice.

To our mind the most important part of a transfusion lies in the hands of the laboratory. We believe that the cells should be crossed matched, that is the patient's serum with the donor's cells and the donor's serum with the patient's cells. We insist that this be done and feel that this procedure more than any other keeps us out of trouble.

We insist that a patient's blood be rechecked for a second or third transfusion just as accurately as for the first, even though we use the same donor.

As to technique we have in the past used the Ungar apparatus. We believe there is nothing in surgery where we should have more correct technique; for that reason we have again resumed the citrate method. We give normal saline both before and following the blood.

That to be given before, be very sure the blood will flow freely, that following the blood, to wash all the cells, thus so as not to waste any.

The transfusion should be given rapidly, never taking over ten or fifteen minutes to complete it.

*Dr. Frederick J. Waas, Jacksonville:*

I don't know of anything that has done more for us in converting poor surgical risks into safe risks than blood transfusion.

The question of reaction has always been uppermost in my mind—I think it has been brought out this afternoon that a question of technique might be responsible for most of our mistakes. If our technique is good, we will not get the reaction. I am certain some men refrain from transfusion for fear of reaction; one of the chief things in getting results from transfusion is team work that has just been mentioned here. Team work cannot be too urgently impressed.

I think universal donors cause more reaction in my experience than properly adapted donors. I do not know of anything that will build up the hemoglobin as immediately as transfusion. I recall an instance of an infant who was circumcised at the time of birth, and he proved to be a bleeder. This child bled for three days almost to the point of exsanguination; we tried every measure to overcome it, and as a last resort we gave him 50 c.c. of his father's blood in the longitudinal sinus, and in three minutes the child had stopped bleeding, and was converted into a safe

category. To my mind, I do not know of anything that will convert a poor surgical risk into a safe one as well as transfusion.

One thing, always be ready for an autotransfusion in instances of ectopic rupture, and do not wait until the last minute to do your transfusion.

*Dr. Kirk (closing):*

I thank you for the discussion. I have been interested in checking up on my cases. The main point of my discussion was to point out the abuse of blood transfusion given at the wrong time, to the wrong patient, in the wrong way. In closing I would emphasize again that I am an advocate of this procedure when the conditions are exactly right and when the work is skillfully done; if it is not skillfully done I would rather have the patient die than to go through with it. I have seen qualified surgeons draw a pint of blood and never get it inside of the patient within two hours' time. If the same doctor did as poorly, for example, in removing a kidney he would be cross-fired with criticism immediately. It must take a tremendous amount of nerve for some men to refer their cases for blood transfusion.

You must have team work. I think some good results come of the citrate method. We must remember that in any method we must take into consideration that many risks are poor risks at the start and we must remember that everything that can be done for the patient must be done and if I have stimulated any interest in this matter or done anything to stop this abuse of transfusion I feel that I have been repaid.

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### A CONSIDERATION OF SOME SURGICAL LESIONS OF THE LARGE BOWEL\*

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The subject of surgery of the large bowel is such an extensive one that it would obviously be impossible in a paper of this length to do more than enumerate the different lesions. For this reason it was thought best to limit the subject matter to a few of the diseases which we have found most interesting and instructive. In par-

ticular, those diseases involving the caecum and ascending colon will be considered. In any study of surgical lesions involving this portion of the gastro-intestinal tract cancer should be given prime recognition.

Because of certain factors to be discussed later the following case history is presented for your consideration:

Miss L. M. B., white, age 51, came to the Riverside Hospital about October 1, 1927, because her dentist told her that she should seek medical advice as her gums were anaemic. Her history showed that about sixteen years ago the uterus was removed for a fibroid tumor and that three years ago she had another abdominal operation for pelvic adhesions, at which time both ovaries were removed. She further stated that three months before admission she was aware that she was anaemic, tired very easily on exertion, and was short of breath. For the past year she had noticed blood intermittently in the stools which she attributed to the presence of hemorrhoids which had troubled her for several years. At times the blood would be quite bright in color and at others darker. For the past year she had had occasional pain in the right lower quadrant of the abdomen, dull aching at times and sharp shooting at others. The pain had never been severe enough for her to seek medical attention for its relief. The bowels were constipated but moved without difficulty with laxatives. There had been no loss of weight, in fact, she had gained ten to fifteen pounds during the last year.

Examination showed a woman of middle age, well nourished, but with a marked degree of anaemia which was apparent in the skin, sclerae, and mucous membranes. General physical examination was negative with the exception that there was some tenderness noted in the right half of the abdomen about opposite the umbilicus. Rectal examination showed the presence of hemorrhoids. Digital rectal examination was otherwise negative. Proctoscopic and sigmoidoscopic examinations were negative. Urinalysis showed the presence of a few pus cells but was otherwise negative. Examination of the blood showed on July 5, 1927, hemoglobin 45%, red blood cells 2,544,000. Differential count, 56% neutrophils, 42% lymphocytes, 2% eosinophiles. Blood smears showed no malaria parasites. There was some anisocytosis and acromia was marked. The icterus index was 9.8; Wassermann reaction was negative. The urea blood

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nitrogen determination was 20 mg. per 100 c.c., the urea 12.8 mg. per 100 c.c. Examination of the gastric contents after a test meal showed no food remnants present; about 25 c.c. of fluid were withdrawn, which gave a negative test for occult blood. Free hydrochloric acid showed a maximum reading of  $22\frac{1}{2}$ ,  $1\frac{1}{2}$  hours after the test meal. At this period the total acid was 12.7. Blood typing showed the patient belonged to group No. 2 Jansky. A blood examination done

on Sept. 22, 1927, showed that the hemoglobin had dropped to 35%, the red blood cells 3,256,000. On September 30th the hemoglobin was the same; white blood cells 6,000; red blood cells, 2,900,000; color index 0.6. Repeated examinations of the stools showed blood to be present on each occasion. X-ray examination Sept. 30, 1927 (Dr. Beals) was done with the following conclusions: "Chest negative. Stomach and duodenum are entirely negative. Urinary tract,



FIGURE 1. Carcinoma of ascending colon, showing filling defect.

lumbar and sacral spine are negative. There is a constant filling defect in the ascending colon. This indicates the presence of a deforming lesion. Malignancy or possibly tuberculosis should be strongly suspected."

The patient was again X-rayed by Dr. Beals, using a barium enema and there was found the same deformity of the ascending colon. (*See Figure 1*).

On October 4, 1927, 315 c.c. of blood was given by direct method and on October 8, 1927, 200 c.c. was given in the same way.

The patient was prepared for operation by means of the blood transfusions as noted, rest in bed, enemas to clear out the bowel, a restricted diet, forced fluids and paragoric in fairly large quantities for forty-eight hours preceding the operation, in order to decrease the amount of fluid within the intestinal lumen. Operation was done on October 10, 1927, at which time a mass about three inches in diameter was found involving the ascending colon just above the caecum. A resection involving the last few inches of the ileum, caecum, ascending colon and the hepatic flexure was carried out and the intestinal continuity established by means of a lateral anastomosis between the terminal ileum and the first portion of the transverse colon. Gross examination of the specimen after removal showed it to be an ulcerated type of carcinoma encircling the bowel to the extent of about  $\frac{7}{8}$  of its circumference but not producing any appreciable degree of obstruction. Subsequent microscopic sections proved the growth to be an adeno-carcinoma. The patient had an uneventful convalescence with the exception of a superficial infection of the wound and on discharge on November 14, 1927, the hemoglobin was 66%. There was practically no distention at any time. The bowel function has been entirely normal since the operation.

On reviewing the history of this patient we are impressed, firstly, by the apparent lack of appreciation, on the part of the patient, of the fact that she was seriously ill; secondly, by the rather grave anaemia in one who on cursory examination presented so little to account for it.

With the exception of cancer of the stomach, ulcerating carcinomata of the caecum and ascending colon produce the gravest anaemias of all surgical lesions of the intestinal tract. It is therefore of the utmost importance to bear these

facts in mind in the investigation of patients who present varying degrees of secondary anaemia not easily accounted for. One frequent source of error is to attach undue importance to the patient's statement that blood in the stools is due to hemorrhoids.

It was long thought that anaemia seen in cancer of the right colon was due to some inherent property of the mucous membrane of the caecum and right colon whereby its invasion by cancer cells produced the anaemia in question. In the absence of any detailed study on this subject this conclusion appeared feasible as carcinoma elsewhere does not produce the degree of anaemia seen in lesions of this portion of the intestinal tract. In even massive ulcerating carcinomatous lesions, as of the breast, the anaemia is not so marked. Much light has been thrown on this obscurity by the recent work of Alvarez, Judd, McCarthy and Zimmermann<sup>1</sup> who conclude from their investigations that: "Carcinoma of the caecum and ascending colon has a marked tendency to produce severe grades of anaemia. This tendency is less marked with cancer of the transverse, the descending and the pelvic portions of the colon."

The gradation cannot be explained on the basis of a greater loss of weight, more severe hemorrhage, or greater malignancy of the tumors in the right half of the colon. The malignancy of colonic cancers as a whole is low as compared with that of gastric cancers, and the tendency to metastasize is greater with cancer of the rectum than with that of the caecum. The cause for the gradation in anaemia seems to be a gradation in surface area of the tumors, being greater in the caecum than in the sigmoid.

As would be expected, then, patients with cancers in the narrow descending colon are driven to seek relief early, usually within six months after the onset of the trouble. The symptoms with cancer of the caecum are less urgent and sufferers often put off consulting a physician until they are markedly anaemic.

There is a definite relation between the area of the tumor removed at operation and the degree of anaemia.

The essential factor in the production of anaemia seems to be the presence of a larger ulcerating area from which blood can ooze and through which bacteria can enter. Nowhere else on the inside of the body can ulcerating cancers be found so large as in the caecum and

nowhere else are such big, raw surfaces in contact with a concentrated culture of organisms, many of them virulent, and when injected into animals, capable of producing severe anaemia.

The patient seeks relief when the lumen of the bowel becomes more or less blocked. In the descending colon this can happen when the tumor has grown to the size of a walnut; in the caecum it does not happen until the mass is as large as a man's hand."

Within comparatively recent years much progress has been made in surgery of malignancy of the large bowel, particularly in extending the field of operability of these conditions. Many lesions are now successfully operated upon which in the past were deemed inoperable, thus giving the benefit of surgery to many of these unfortunates who in the past would have been given up as hopeless. This has been made possible by no one factor but rather a combination of several of them. Of these may be mentioned, more intense study and proper preliminary care of the patient before coming to operation. The anaemia is combatted by blood transfusions, the toxemia by forced fluids, the liver damage alleviated by giving glucose. In the obstructive lesions graded operations, for example, a preliminary enterotomy combined with the above, have served to put the patient in the best possible shape for the more serious operation which is to follow. As to the actual operation in patients who are a bad surgical risk, multiple stage operations, as for example the Miculicz operation has been of no little importance in reducing the mortality. Finally, intelligent post-operative treatment, abundance of fluids, given by hypodermoclysis or intravenously, liberal administration of glucose, rest of the bowel and the prevention of distention by not allowing the patient anything by mouth for two or three days following the operation have been additional factors of safety and have a direct bearing on the operability of a given case.

In the past the surgeon has been largely governed as to the resectability or operability of a given malignant lesion by the presence or absence of enlargement of the regional lymph nodes. This, of itself, should not be a contraindication to a radical operation as in a great many instances the enlargement is inflammatory rather than metastatic. Of particular interest in this connection is the work done by Craig and Mc-

Carthy<sup>2</sup> who in an investigation of this subject show that:

"Of 1033 pathologic specimens examined 32% showed metastatic involvement of the regional lymph glands.

"Lymph glands were found which were normal in consistency yet palpable and visible to the naked eye.

"The size of the intestinal lesion, and the size of the regional glands, proved to be no criterion of the presence or absence of metastasis.

"Lymph glands simulating cancerous glands in size, due to marked cellular infiltration and lymphedema were found to be inflammatory.

"Glands too small to be palpated at the time of operation were found to be the seat of metastasis."

The following case history is included to illustrate a more marked anaemia than in case 1 and to illustrate the possibilities of resection in quite large lesions:

H. L. W., white, age forty-two, entered the Riverside Hospital January 27, 1926, for the complaint of anaemia and "catarrh." He stated that in June, 1925, he found that on arising in the morning that he felt weak and dizzy but was able to carry on his work for part of the day. He consulted a physician who told him that he was anaemic and was given iron intramuscularly for about two weeks, feeling much better and stronger at the conclusion of this series of treatments. He remained well then until the following month when he again began to feel badly and on consulting a specialist was told that he had malaria although organisms were not demonstrated. He was given a further course of iron. Following this, he had an attack of ptomaine poison and was severely ill. His hemoglobin at this time was 30%. He again sought medical attention and was advised that he did not have carcinoma or pernicious anaemia but intestinal parasites. He was given a transfusion with marked improvement. A second blood transfusion was done on October 10, 1925, with further improvement. Following this he gradually began to lose strength and weight and on December 22, 1925, was given another blood transfusion. His appetite has always been good. The stools, although seldom formed, have been normal in color. He complained of extreme hunger every five or six hours, so much so that he had actual pain in the upper abdomen which was relieved by food. There has been consider-



able gas and belching after eating although this has improved somewhat in the past three weeks. About once daily on an empty stomach he has nausea and vomits up about one-half cup mucous. Wines and whiskey are sure to aggravate the vomiting and nausea and occasionally cause a mucous diarrhea.

Physical examination: On inspection there is a very severe pallor of the skin and mucous membranes. The sclerae are anaemic. The heart and chest are negative. The abdomen is rather scaphoid in shape; liver dullness extends one finger-breadth below costal margin. The tip of the spleen is barely palpable to forced expiration. No masses were palpated. Extremities are emaciated. The urine is negative.

On admission the hemoglobin was 29%; red blood cells 2,552,000; leukocyte count 10,200; neutrophils 76%; lymphocytes 19%; eosinophils 1½%; normoblasts 3%; anisocytosis, poikilocytosis and achromia were marked. No malaria parasites were found. The patient belonged to group 2 of the Jansky classification. Wassermann reaction was negative. Gastric analysis showed at the end of the third fifteen minute period free hydrochloric acid 11.9; total acidity 22.61. There were only two or three c.c. of gastric residue present which showed no gross or occult blood. Examination of the stools on numerous occasions showed occult blood to be constantly present but negative for ova and tubercle bacillae.

X-ray examination by Dr. Beals. The conclusions from this examination are as follows:

"The several shadow increases noted in the liver area are not at all typical of gall stones although at least one corresponds in position to that of the gall-bladder. These calcifications suggest healed tuberculous lesions, calcified lymph nodes, or some other less specific condition. There is a constant deformity of the pylorus, the presence of which was confirmed by a second examination with the patient under full physiologic effect of belladonna. This would indicate the presence of a prepyloric lesion, probably ulcer, on the lesser curvature. However, there is no apparent degree of obstruction. The ascending colon was never filled to a normal contour. (*See Figure 2*).

This finding alone indicates the presence of a rather extensive lesion involving this portion of the bowel wall. Malignancy is, of course, the most frequent cause of such deformity.

However, tuberculosis of the ascending colon should be considered, especially in view of the numerous calcifications noted throughout the upper abdomen.

After the usual preoperative preparation which included two blood transfusions by the direct method, operation was done on February 11, 1926, the preoperative diagnosis being carcinoma or tuberculosis of the ascending colon and gastric ulcer. Under nitrous oxide ether anaesthesia the abdomen was opened by means of a right rectus incision. Inspection of the stomach and duodenum failed to substantiate the X-ray findings as to prepyloric ulcer. In the ascending colon about midway between the caecum and hepatic flexure was a hard mass about three inches in diameter involving the entire wall of the bowel and adherent to the tip of the liver. There were no adhesions to the small bowel but the mass seemed to be fairly firmly fixed posteriorly and laterally. The healthy bowel wall above and below the mass could be invaginated through the mass demonstrating the fact that there was no obstruction. There were no glands present in the meso-colon. Examination of the liver showed two subcapsular nodules, hard and irregular in shape. Excision of one nodule demonstrated a caseous lesion. There was another similar nodule located on the convex surface of the spleen. As the general condition of the patient was poor it was decided to do a Miculicz operation as it was deemed unwise to subject the patient to an immediate radical resection. By means of an incision through the peritoneum to the outer side of the colon the mass with the caecum and ascending colon were freely mobilized without difficulty. The mass was then delivered from the abdomen and the proximal and distal loops of the colon united by means of interrupted sutures. The peritoneum and fascia were then united to these loops and the wound further closed in the usual manner. Sections made from the nodules excised from the liver showed this to be chronic inflammatory tissue and not malignant. Two days later the protruded mass left from the first operation was amputated close to the skin margin with an actual cautery and a Paul tube introduced to the proximal end of the bowel and held in place by means of a purse string suture. Gross examination of the specimen excised showed it to be a very large ulcerated lesion with gangrenous and necrotic base and edges. Sections from the mass



FIGURE 2. Carcinoma of ascending colon, showing extensive deformity as indicated by arrows.

showed this to be an adenocarcinoma. Following this operation clamps were applied in order to cut through the spur left between the proximal and distal loops with the idea of further closing the bowel by means of a third operation after the clamps had cut through. However, following this second procedure the patient gradually lost strength and it became apparent that

he would not survive the ordeal. The patient died February 18, 1926, one week following the first operation.

An analysis of this case brings out several points of interest. The first is that the patient, although having been seriously sick for some length of time, had never had a complete examination and diagnosis made of underlying lesion

which was to cause the loss of his life. I am sure that had this been done at an earlier date the cause of his anaemia could have been found, and a radical operation done at a more favorable time.

The second point of interest is the confusion which exists between the diagnosis of tuberculosis of the bowel and carcinoma. In view of the fact that tuberculosis of the bowel very rarely indeed produces an anaemia to the extent which this man showed should have given us a clue as to the correct underlying pathologic process. It is possible that our surgical judgment was somewhat in error in estimating the condition of the patient for this operation. Possibly a more prolonged pre-operative treatment with additional blood transfusions might have gotten him in better shape. The question of gastric ulcer remained unsolved. Certainly there was sufficient evidence both from the standpoint of history and X-ray findings to warrant such a diagnosis, yet knowing these and with the abdomen open, no lesion could be found in the stomach or duodenum to account for these findings.

Mention has already been made of the fact that tumors in other portions of the large bowel when even small bring the patient to our attention much sooner than those of the right colon. The following case history is given to illustrate this point. It is of further interest to note in this patient that carcinoma developed elsewhere at a remote period from the trouble with the bowel:

Mrs. J. G., age 51, came to the Riverside Hospital on September 10, 1920, complaining of pain and a growth in the epigastrium. She gave the onset of her present trouble as beginning Christmas, 1919, with spasmodic pains in the lower abdomen resembling labor pains, which at first occurred about every hour, then gradually becoming further and further apart finally ceased in about three weeks. There was considerable vomiting and loss of weight accompanied by weakness. Three weeks before admission to the Hospital she noticed a lump in the epigastrium which she thought had increased in size. This was very sore and caused painful breathing. There had been no localized pain in the region of the appendix. Physical examination showed a small woman below normal weight, apparently anaemic. The abdomen was soft, slightly distended. There was tenderness above and to the right of the umbilicus, where a tender, freely

movable tumor about one inch in diameter could be palpated. The physical examination was otherwise negative. On admission the white blood count was 15,400; differential count normal; hemoglobin 90%; red blood cells 4,000,000; Wassermann reaction negative; malaria negative. Examination of the stools showed particles of bloody mucous. A stained smear from the stool was negative for tubercle bacillae. The urine showed nothing abnormal. A diagnosis of tumor of the large bowel, probably of the transverse colon was made. Operation September 16, 1920, disclosed a small, hard, rounded tumor involving the first portion of the transverse colon which was adhered to the omentum. There was no regional glandular enlargement. The liver was negative. The growth and adjoining bowel was freely mobilized and delivered from the abdomen and the wound closed around the projecting limbs of bowel in the usual manner. A few days later the growth was amputated and clamps applied to cut the spur between the two limbs of the bowel. Following this the bowel was closed. Examination of the excised specimen showed it to be an encircling lesion which was producing a partial obstruction of the bowel at this point. Pathological sections showed that the growth was an adenocarcinoma. There was no ulceration of the mucous membrane. The patient made an uneventful convalescence and remained perfectly well until the latter part of December, 1925, at which time she reentered the hospital because of severe uterine hemorrhage. A diagnostic curettage and pathological examination of the curettings demonstrated adenocarcinoma. A complete hysterectomy was done and an adenocarcinoma of the fundus of the uterus found. Since this date the patient has remained entirely well and free from recurrences.

In conclusion, it is again emphasized that.

(1) A complete examination, including detailed X-ray study, should be done on every patient complaining of anaemia of which the cause cannot be readily found, and,

(2) In all patients, particularly in the cancer age, complaining of hemorrhoids with bleeding, the rectum and colon be thoroughly examined for malignancy.

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## RUMINATION OR MERYCISM\*

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Rumination or merycism are words of Latin and Greek origin respectfully, meaning "the casting up or regurgitation of food from the stomach to be chewed again." The application of these definitions, as applied to the habit of rumination, in the first year of life would be the regurgitation of food from the stomach to be spit out of the mouth, because these children do not make any attempt to masticate their food.

In reviewing the American literature on this subject, I find two cases reported in Archives of Pediatrics in 1881 and 1921. A few cases may be found in *A. J. of D. of C.* In the text-books it is conspicuous by its absence. Abt gives about four pages which is quoted from various reports mentioned above, and expresses the opinion that this habit—if a habit—in his opinion, is of more frequent occurrence than commonly believed and is often overlooked. This comprises about the most elaborate treatise on rumination I have been able to find.

For convenience of study, will classify ruminators into three different types, basing these types on the physical status of the child as a result of loss of food by rumination.

*Type One.*—At the age of 3 to 5 months this type will ruminate only a certain quantity of food, regardless of the change in formula or taste of food, and after the habit is well formed, will maintain the same body weight, without gain or loss. The weight height basis in this type will gradually grow to greater disproportions, due to a gradual, but diminished, skeleton growth.

This type will show some definite method of rumination, aided by placing fist or several fingers partially in mouth. Patient may use either hand when one is restrained, or both hands.

This type is rather hard to detect, unless rumination is kept constantly in mind, for the hands and arms obscure from view the typical facial expression, contraction of muscles of neck, throat and mouth, with a periodical and slight contraction of the abdominal muscles.

Rumination of all types can be influenced for a period of 12 to 48 hours by a radical change in formula which completely changes the taste of the food. This would add a few ounces to the

child's weight, which gain would be maintained, but not increased longer than 48 hours.

Many changes of correctly estimated formulas will keep patient's weight at the same level. This type does not show a highly exaggerated nervous complex.

Digestion of all food ingredients in this type is normal, as shown by chemical and microscopic examination of stools.

Patient is constipated and nervous and efforts to overcome this condition are not very successful. This is most probably due to the perfect digestion of the food and small quantity retained and rapid absorption from the intestinal tract. This would result in a small amount of fecal residue, and by the time it reached the end of the digestive tract would be a scabulous mass. Under these conditions patient soon falls a victim to one or more of the variously used purgatives supplemented by suppositories and enemas. The abdomen of this type is somewhat retracted and is free from gas.

*Physical Examination.*—Shows a baby free from infection and organic lesions. Underweight, fairly well developed skeleton, with a marked diminution of subcutaneous fat. Patient is hungry and fairly active. Takes food ravenously. The nervous system of this type is extremely well preserved. Rickets is present.

*Differential Diagnosis.*—Must be differentiated from pylorospasm, congenital, hypertrophic, pyloric-stenosis, so-called indigestion, habitual vomiting, and marasmus.

*Type 2.*—A pale, thin, highly nervous child, with a ravenous appetite, very fretful. Constipated with a gradual loss of weight over a long period of time. Begins rumination almost immediately following the ingestion of food, and this is continued at intervals from one to two hours. In two hours the stomach is empty and the contents are so successfully ruminated that little food passes out of the stomach to nourish the baby. These patients usually give a negative history of any nervous disorders in parents.

The habit continues until baby becomes so emaciated he is classified as a marantic and death will result from starvation unless the habit is restrained.

This type is more easily diagnosed as a ruminator than either the first or third type, by the vigorous manner in which they ruminate. Very little success in treatment of this type is obtained

\*Read before the Hillsboro County Medical Society, Tampa, October 18, 1927.

by radical change in diet. They will ruminate a liquid or semi-solid food with the same degree of success. Water is retained fairly well, unless given in large quantities, when it is ruminated in same manner as food.

*Type 3.*—Is a modified combination of both type one and two. They do not develop into the steady or vigorous type of ruminators as described in class one and two, and as a result do not become emaciated to the same degree, nor do they develop the steady nervous syndrome as expressed in the two types just described. This type, in my opinion, comprises by far the largest group of ruminators. They usually show an irregular up and down weight curve and in the end come out fairly well. In this group is contained the large number of so-called habitual vomiting cases.

*Treatment* of first and second type is best accomplished by immobilizing the lower jaw, either by some form of mechanical appliance or by manual inhibition of the act. Treatment of second type is more difficult, because the diagnosis is often uncertain. The feeding in past has been both bad and good, for in the efforts to obtain a food that baby will not spit up he is often put on an unbalanced diet. His nervous system is deranged; in fact, his whole physical being is thrown out of gear and he readily becomes a fit subject for some habit spasms, one of which may be rumination. This may lead to either one of the three types mentioned, depending largely on the nervous organism of the baby in question.

*Case 1.*—Male, age 5 months, first and only child.

Mother and father living and in good health.

Maternal, paternal, uncles' and aunts' histories negative.

Labor normal, baby did not show any symptoms of birth injury or evidences of difficult breathing, or strangulation. No methods of resuscitation were used.

Nursed two weeks, was then put on artificial food. Mother stated that child had colic and spit up food often. This was cause for weaning baby and placing him on artificial food.

At the age of 3 months child weighed 9.8. Was spitting up food after each feeding. Mother stated child was kept under observation for a while. Diagnosis of congenital pyloric stenosis was made, operation performed. At time of operation no enlargement of pylorus was found.

Adhesions were suspected, so a small slit was made in muscular band of pylorus and some bands in region of gastropyloric ligament were severed. Wound closed and child was treated as a pyloric and also as one having adhesions.

Child did not gain in weight and continued to spit up its food, maintaining a weight of 9.9, same as when it was 3 months old.

Patient was seen on June 16, 1927. Mother stated she had removed child from care of former physician a few days before and that child was still spitting up its food, and had not shown a gain in 10 weeks. Child was taking imperial granum.

*Physical Examination.*—Showed a child as described in type 1. Mother reported Wassermann negative. Weight was 9.9, height 25".

*Treatment.*—Whole milk, cod liver oil, calcium, and sun bath. On June 25th, four days later, child weighed 10.2, same treatment. It was on the third visit to office that the symptoms of rumination were noted and treatment for restraint instituted. On 7-8-27 child weighed 10.11, on 7-17-27 weighed 11.12, on 8-2-27 weighed 13.4, on 8-23-27 weighed 14.5, and on 10-2-27 weighed 17.

No changes in diet or treatment was made.

*Case 2.*—C. F., age 5 months; had been sick for about 3 months. Was then very much emaciated, highly nervous and presented all the signs and symptoms of a typical case of marasmus.

*Physical Examination Negative.*—Had been fed many different formulas, without result. Patient was put on 4-hour schedule of whole milk, 6 ozs. at each feeding. For 5 days patient did not gain. At this time symptoms of vigorous rumination were noted. Measures for prevention of rumination were instituted, patient immediately began to improve and made an uneventful recovery. Diet was not changed during the period of recovery.

This case presented all the symptoms described under type 2.

Many cases have been seen as described under type three. These patients, however, seldom require the use of any special method of restraint. The habit is poorly developed in this class of ruminators and they usually correct the habit themselves after a modification of the diet.

Many cases of this type are treated as patients with digestive disturbances, and the cure is credited to a change of diet.

# A CONCEPTION OF TODAY'S RELATIONSHIP OF DENTISTRY AND MEDICINE\*

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I may say in the beginning that this paper is not offered as a brief for dentistry, or a plea for its wider recognition in the field of the healing arts. I have never had much patience with those of my brethren who bemoan the fact that by some our work is still considered largely mechanical, and that the populace at large, as well as members of other professions, are not properly impressed with our professional status, and the importance of our share in the healing of the sick.

My observation has been that in this, as well as in most other things in this vale of tears, we get back in very fair proportion what we put out, and it has always been my contention that just in so far as we have progressed and can deliver in the scientific treatment and healing of the lesions of the oral cavity, to just that extent will recognition be accorded us.

Moreover, it is not my belief that dentistry can be classed strictly as a specialty of medicine, as some of my profession seem so ardently desirous of distinguishing it. If we accept oral surgery, extraction, orthodontics, mouth hygiene, prophylaxis, root canal therapy, and first aid treatment as the practice of dentistry, we may accept dentistry as a specialty of medicine in some sense of that term; for these branches are comparable with operative and therapeutic practice in other fields of medicine, particularly those involving the head, and our basic training for diagnosis, prognosis, and practice under such conditions is very similar.

But there is an essential difference between dentistry and the other medical specialties, such as rhinology or ophthalmology, that difference being the technical reparative and restorative procedures that the dentist must perform, and which unquestionably furnish a large part of dental practice today.

It would seem then that ours is a profession unto itself, with four years of training for our special work, very closely related to medicine to be sure, because it is intimately connected with the problem of general health and function, and in addition dealing with the mechanics of artis-

tic and efficient restorations of lost function in the mouth.

To my mind dentistry can stand and deliver on this basis in complete cooperation with the medical profession, with a recognition of medicine's wider field, and with no need to beg or borrow status from anyone.

The last decade marks a notable period of advancement in dentistry and oral surgery, and our work has risen far above the standard of the days when it was considered simply a high type mechanical art, having little to do with health or disease. It is my purpose then to bring before you some of our common problems in the treatment of disease, that seem to call for a more complete understanding of each other's province, that we may each profit by and take advantage of the other's special knowledge and training.

That both medical and dental professions are fast realizing the correlation between dental and systemic disease is evidenced by the recognition of the fact that no problem dealing with general health is at all times purely dental or purely medical in scope. The pathologic phenomena of dental disease and of the investing structures are fundamentally the same as that of any infection anywhere in the body. Local conditions about the teeth and mouth always afford the elements necessary for growth and multiplication of pathogenic micro-organisms, which are carried into the deeper structures by the blood and lymph.

A study of the investing bony tissues of the teeth clearly indicates the processes involved in the dissemination of disease from the roots of infected teeth to remote parts of the body, and confirms the conclusion that these infections are anything but localized conditions.

In pyorrhea alveolaris, when pus is being constantly discharged into the mouth, systemic involvement follows not only by absorption by the blood and lymphatic capillaries of the gum tissue and periodontal membrane, but by absorption through the stomach and intestines of the swallowed pyogenic discharges. Thus absorbed bacteria invade the viscera, muscles, joints and nerve structures, and there give rise to any one of a series of pathologic manifestations. It may be duodenal ulcer, an arthritis, a myositis, a neuritis, or even a psychosis.

Of course, not all chronically infected teeth cause systemic trouble, nor are dental and oral foci the only causative factors in the production of chronic systemic diseases, but they should

\*Read before the Leon-Gad-den-Liberty-Wakulla-Jefferson County Medical Society, Chattahoochee, October 13, 1927.



never be overlooked in the search for etiology and, when found, every effort should be made to eliminate them, regardless of any coexistent foci present in other parts of the body.

Next to a proper evaluation of dental findings with reference to their etiologic significance in every case of systemic disease, a better understanding of the so-called symptomatic mouth lesions is of great importance. In the oral cavity are frequently registered the reactions of many systemic disturbances. The well-known and clinically characteristic oral manifestations in most febrile diseases, such as the typical Koplik's spots in measles, the grayish white spots on tonsils and pharynx in diphtheria, the strawberry tongue in scarlet fever, the dry and abraded oral mucous membrane in typhoid, etc.; also the mucous patches in early syphilis and the oral symptoms of metallic and drug poisonings, are examples of this phenomena.

There is rarely a constitutional disease, whether it is one of the blood or of the degenerative, metabolic or nutritional types, where there is no abnormality of some kind or other about the oral tissues.

Thus, we observe that diseases like diabetes, anemia, pernicious anemia and tuberculosis are invariably associated with spongy, bleeding gums and pyorrhea. Sore bleeding gums and glossitis are especially prevalent in anemias. In pellagra a condition exists which not only produces a glossitis and sore mouth, but there is also an inflammatory reaction which frequently involves the entire gastrointestinal tract. It is not uncommon for dentists to hear complaints from patients suffering from renal and cardio-vascular diseases and resultant hypertension, and who wear artificial dentures, that they suffer from burning sensations in the tongue or palate, that can only be explained on the basis of circulatory disturbances.

Obviously it is not only unscientific but futile for the dentist to treat local conditions which, as in these instances, are but manifestations of some deeper pathologic processes, without studying in collaboration with the physician the patient's general physical condition, and instituting adequate general treatment. Likewise, the many abnormal conditions about the teeth and associated structures require the diagnosis and care of one trained in dental and oral pathology.

It seems to me that the very highest type of reciprocal correlation of our two professions should exist in the practice of group medicine

such as we are engaged in here in this institution. We are at all times immediately available to each other, have at hand pathological and radiographic laboratories, hospital and infirmary facilities, and by availing ourselves each of the other's special training and facilities a quicker and more comprehensive diagnosis could unquestionably be made in many instances, and our service to these people more closely approach that which should be the ideal of all the healing arts—prevention rather than correction.

My vision for the dental service includes something more than superficial clinical examination, followed by treatment based on the outward manifestations of the oral cavity. X-rays of the entire mouth should be routine, which with clinical findings and history should furnish the basis for a dental report to the physician in all physically sick cases. This, with consideration of the findings of the general medical examination, would furnish an intelligent basis upon which to proceed with any treatment and particularly in determining the advisability of anything surgical, such as extractions, etc., as well as the necessary preoperative and postoperative care.

On the other hand it is not presumptuous to feel that the results of a complete and scientific dental examination and diagnosis would furnish the physician with an insight into conditions that might otherwise progress unsuspected with the result that his treatment is delayed or defeated.

Dentists and physicians, during a long period, knew but little of each other, and that little was not always the good. It appears that they parted company in Egypt about the time Moses escaped from under Pharaoh's hand with the Israelites. At any rate they have remained much apart until the last few years. There was a time not beyond the memory of those of us who count ourselves as yet young, when the ground on which a physician referred his patient to a dentist was toothache, and not always then, as many a broken off molar will attest, and no ground at all on which the dentist referred his patient to the physician.

Times have changed and professional outlook with them. The dentist needs the physician and knows it. The physician's need of the dentist, while possibly not so great or well known, is a fact nevertheless. Thus, a closer relationship has grown up and is yet developing. Why not make the most of it, for our mutual benefit and the good of those we serve?

# ANEURISM OF THE THORACIC AORTA. CASE REPORT\*

Joseph H. LUCINIAN, M.D.,  
Miami.

H. W., a white man, 57 years of age, was referred to me by Dr. S. E. Chambers for roentgen ray examination of the chest.

His family and past history presents nothing remarkable except for a lesion on his external genitalia contracted forty years ago.

His chief complaint is that of hoarseness and an annoying cough which began three years ago with a sudden onset of complete aphonia lasting five weeks. For the past eight years he has been having inconstant pain between his shoulders, often dull but occasionally boring in character. Following strenuous exertion such as lifting of heavy safes, pianos and railroad ties, at which he makes his living, he has sharp pains in his chest and suffers considerably from dyspnea. He also complains of occasional vertigo.

The positive findings in his physical examination are confined principally to his chest which shows a prominent bulge at the right of the sternum. To the palpating fingers a definite impulse is transmitted which becomes more unmistakable when one hand is placed over the mid-dorsal spine and the other over the sternum. A distinct pulsation is felt at the suprasternal notch. Tracheal tugging is at times noted. Increased cardiac dullness 2 cm. beyond the normal limits to the right. A systolic murmur heard over the left chest with a maximum intensity in the left third interspace transmitted upward toward the neck. The second sound is accentuated over the sternum. The pulse in the radials is not retarded. The blood pressure, however, shows a decided difference, that on the left being 140/90 as compared with 140/65 on the right. The arteries are markedly sclerotic. The blood Wassermann test is strongly positive.

Fluoroscopic examination shows the supracardiac shadow unusually enlarged, fusiform in shape and in sharp contrast to the surrounding lung structure. The enlargement begins just above the right auricle and is continued upward and to the left. Definite expansile pulsation can be made out synchronous with the contractions of the left ventricle. The shadow is seen to be continuous with that of the aorta in all the vari-

ous diameters of the chest. The posterior mediastinal space is encroached upon by the descending portion of the enlarged shadow which is nearly saccular and lies closer to the posterior chest wall. The esophagus is not compressed nor is the trachea appreciably displaced. The heart shows no enlargement. The midportion of the left lung field is not as clear and bright as the right.



FIG. NO. 1.—Aneurysm of the thoracic aorta shows extensive fusiform dilatation of the aorta. Primary lesion 49 years ago previous to X-ray examination. Wassermann test strongly positive.

The roentgenogram confirms the fluoroscopic findings. The shadow represents a diffuse aneurism of the thoracic aorta. It is remarkable because of the extensive involvement of all the portions of the arch.

Differential diagnosis, from the roentgenologic standpoint, presents many difficulties. Aortic aneurism may not always be easily distinguished from mediastinal tumors, primary or metastatic. Tumors may transmit the pulsations of the aorta and be mistaken for aneurism. On the other hand, pulsation may be absent in aneurism or very difficult to make out. Tumors, as a rule, have less sharply defined borders and the aorta may be made out as a shadow distinct from that of the tumor. The heart and aorta are often displaced by tumors. Lymphoblas-

\*Read before the Dade County Medical Society, Miami Beach, June 3, 1927.

tomas, such as Hodgkin's disease and primary sarcomas, are more irregular in outline and denser than aneurism. Hodgkin's disease affects the mediastinal glands on both sides in the form of long chains and is usually associated with glandular enlargement elsewhere in the body. Deep roentgen therapy causes their rapid disappearance. Esophageal diverticuli and extensive cardiaspasm may be distinguished by observing the passage of a barium meal under the screen. Large, perivertebral abscesses are more or less fusiform, closer to the spine, with sharp borders and do not pulsate. The vertebrae may show a destructive process.

This case is presented chiefly as a classical example of aneurism with all of its etiological, clinical, pathologic, and roentgenologic features so well correlated. We have a man beyond middle age, with history of venereal sore several decades previous to onset of symptoms. He has engaged in strenuous stevedore labor with consequent strain on the cardiovascular system. Present symptoms as outlined above are easily explained by the pathological changes noted in the roentgenogram.

#### GALL-BLADDER DISEASES\*

LEROY A. WYLIE, M.D.,

St. Petersburg.

Some years ago it was assumed that all of the essential facts regarding surgery of the gall-bladder had been settled, but recent studies on the physiology of the liver and gall-bladder show that the gall-bladder undoubtedly has certain definite functions, but just what they are has not been determined.

The gall-bladder is present in most animals which secure their food from the surface of the ground, while leaf-eating animals, *i. e.*, elephants, horse, deer, etc., have no gall-bladder.

*Embryologically* it begins in a small nest of cells from which develop the pancreas, liver, duodenum and ducts. It occurs as a solid end in the common duct which later becomes hollow and enlarges, consisting of four coats, mucous membrane, submucosa containing large lymphatics, muscularis and serosa. It is supplied by a large artery—the cystic and a few vessels from the attachment to the liver. The circula-

tion is full heart pressure, while the liver works under low tension.

In man the gall-bladder holds approximately 30 cc. of bile, about 1/40 or less of the total amount of bile made in 24 hours. This bile is ten times as concentrated as the bile in the liver.

Pure bile is not a good culture medium for the types of bacteria found in gall-bladder disease. When inflammation is present and the bile contains 30% of serous exudate it becomes fairly good media.

Rosenow's idea of selective affinity of bacteria for the gall-bladder wall through the circulation is accepted as the correct one. Possible but not probable causes of gall-bladder diseases are:

1. Bacteria from the intestines gaining entrance through the common duct.
2. Passing through the liver via portal circulation not being killed by the liver action.
3. Bacteria are backed up to the lymphatic system of the gallbladder, thus gaining entrance through the wall.

The common duct is surrounded by muscle which has been described by Oddi as a sphincter muscle controlled by the sympathetic nerves.

It may be that this sphincter is influenced by duodenal peristalsis, or the contents of the duodenum as fat or acids or even intra-abdominal pressure, thereby regulating the flow of bile into the duodenum, but research by Sweet has shown that under normal conditions little or none of the bile which enters the gall-bladder leaves it by way of the duct. It is probable that the gall-bladder has control of its own cystic duct in order to cause pressure filtration of the bile into the blood stream through the lymphatics.

The exact etiology of cholecystitis has been difficult to determine. It has been assumed that the cause was infection, but with the marked advance of aseptic surgery Dr. Judd has shown that from only a very small number of diseased gall-bladders could bacteria be obtained. It is certainly more evident than formerly that source of these conditions occur independently of bacterial infection.

*Symptoms*—The clinical manifestations of cholecystitis are usually definite. The principal symptom is pain, which is very severe, has a sudden onset and radiates characteristically to the back of the shoulders. Yet to attempt to diag-

\*Read before Pinellas County Medical Society, Jan. 27, 1928.



nose chronic cholecystitis in the absence of colicky pain is attended with much uncertainty.

Soreness, tenderness, constant dull pain, dyspepsia, particularly evidenced by belching gas may result from chronic gall-bladder disease. Jaundice is evidence of obstruction in the lower end of the common duct, often caused by other things than stones within the gall-bladder.

We wish to call attention to the close association of chronic gallbladder disease to rheumatism or cardio-vascular disease.

Willis has shown that in 55% of cases of cardio-vascular disease with which cholecystitis is associated, definite benefit and moderation of the cardiac symptoms follow removal of the gall-bladder.

The diagnosis of cholecystitis can be made on the clinical manifestations alone. One of the most valuable adjuncts in making a diagnosis is the Graham Cole method of X-ray examination, but even with this new method of examination the stage has not yet been reached where diagnosis can be made by this method alone. Cholecystography is valuable from the negative as well as from the positive side. When no shadow of the gall-bladder is evidenced there must be occlusion of the cystic duct, probably as the result of contraction on gall-bladder stones or strictures which act as a mechanical block. When the test is positive, the shape, size and general position of the gall-bladder are shown, and stones which might be otherwise overlooked may be recognized.

Carmen has found that the test is of value in 85% of cases. He advocates the administration of the dye by mouth rather than intravenously.

*Pathologic*—Normally the gall-bladder is bluish in hue and non-adherent. Tension plays but a small part in the pathology of the gall-bladder, because after starvation the gall-bladder is never under tension.

In the so-called strawberry gall-bladder we often find lipid substances, which is evidence that the gall-bladder plays a part in the metabolism of fats and these lipoids are not the result of infection.

The incision which is most generally used in operating on the biliary tract is based on that of Bevan, beginning as high as possible between the ensiform cartilage and the costal margin,

passing down about one-half inch to right of the mid line of sufficient length to enable easy approach to the gall-bladder, at the same time reach the appendix if needed. It should not be forgotten that the cystic duct has its origin to the liver side of the pelvis of the gall-bladder, and that the cystic artery usually has its position to the inner side of the duct. Removal of the gall-bladder from below upwards, after separate ligation of the artery and duct facilitates the procedure. A good suggestion is to leave the peritoneum and the posterior aponeurosis of the rectus muscle uncut in the lower one-fourth of the incision. They will retract readily and are a safeguard against subsequent hernia. Drainage is a great comfort in cases of acute infection to both patient and surgeon and is indicated to relieve tension.

*Choice of Operative Procedure*—Again arises the old argument—cholecystotomy vs. cholecystectomy.

In my opinion it is a question of surgical judgment in each particular case. In this locality where we see many acute infections of the gall-bladder in elderly persons, opening and drainage is the operation of choice. Suppose we do have a non-functioning gall-bladder we have a live patient whose span of life is short at best. On the other hand a complete removal is the operation of choice in the many chronic cholecystitis cases.

#### In Conclusion—

It has been my observation that surgical treatment is satisfactory although we may not know the causing factors of gall stones and in inflammatory diseases of the gall-bladder. With all due respect to the internist with his calomel, salts and gall-bladder drainage "for they have their place," when the gall-bladder becomes the seat of definite disease, surgery will offer the best results. To reiterate the salient points of this paper, which I trust will cause discussion, thereby expanding our knowledge of the subject: first, the close association of gall-bladder disease to arthritis, rheumatism and cardio-vascular diseases, secondly, that the gall-bladder has a definite affinity for certain bacteria and that they gain entrance to the gall-bladder wall through the circulation; thirdly, the importance of the sympathetic nerve supply with gall-bladder disease.

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## SOME POINTS FOR CONTRIBUTORS TO THE JOURNAL

The Publication Committee and the Editorial Staff of the Journal request essayists submitting manuscript for publication to have it typed, punctuated and paragraphed as they wish it printed; that every letter in a word be plain with no interlining, obliteration, erasures or additions by pen or pencil; quotations properly marked. Such a prepared manuscript reflects credit, care and attention to detail on the part of the essayist and facilitates its reading by the Publication Committee and lessens the duties of the editors.

We feel that a mutilated manuscript is not intentional on the part of the essayist, but in the hurry of his busy practice, he overlooks the neater details of the preparation of his paper, and by simply calling attention to the matter,

will invite the cooperation and approval of all those who offer papers for publication.

It is suggested to our contributors that they secure a copy of "The Art and Practice of Medical Writing" published by the American Medical Association.

#### DOCTORS' ANNUAL REGISTRATION

The medical registration law requires annual registration with the State Board of Health of all practitioners of every healing art. This law, passed by the legislature of 1927, was endorsed by the medical conference, consisting of the officers of the Florida Medical Association, the members of the State Board of Medical Examiners. The placing of this law in the statute books of Florida has received favorable comment and the members of the Florida Medical Association have been congratulated for their definite progress in having had a law passed requiring medical registration.

While the officers and many of the members of this Association are to be congratulated on their progress and the splendid results of their efforts, there is still work to be done within the bounds of our own membership. For example, we claim 1,138 members in our state association. Only 810 of this number have registered with the State Board of Health. Twenty-nine per cent of our membership has not yet registered as required by the law which we sponsored. The registration of physicians in the state is below the average of the other professions. For example, 60 per cent of the 1,867 physicians in Florida have registered, while 92 per cent of the osteopaths, 78 per cent of the naturopaths and 72 per cent of the pediatricists have already registered; 63 per cent of the members all professions have registered.

While this law prescribes only \$50.00 as punishment against those convicted, a professional man can not afford to place himself in the public eye as a law breaker.

#### STATE NEWS ITEMS.

Dr. Frederick J. Waas, Jacksonville, on request of Dr. W. L. Ashton, secretary of the Lake County Medical Society, addressed the Kiwanis Club of Eustis recently, on organized medicine, safe-guarding health, and medical legislation.

\* \* \*

Dr. B. L. Arms, State Health Officer, Jacksonville, attended the meeting of the State and Provincial Health Authorities and the annual conference called by the Surgeon General of the U. S. P. H. S., held at St. Paul, Minnesota, June 8th and 9th, remaining for the meeting of the American Medical Association at Minneapolis the following week.

\* \* \*

On June 12th, Dr. Frederick J. Waas, president of the Florida Medical Association, gave a very interesting talk before the applicants who were taking the examination of the State Board of Medical Examiners. The meeting was held at the Seminole Hotel in Jacksonville. Dr. Waas talked on organized medicine, urged membership in the Florida Medical Association, and paid quite a compliment to Dr. William Rowlett, secretary of the Board and his associates in their work in raising and maintaining ethical standards for the doctors of the state. About fifty men were present at the meeting.

\* \* \*

An examination was held in Minneapolis, Monday, June 11th, by the American Board of Otolaryngology. Forty-nine applicants were examined, forty-six being granted certificates. The Board will hold an examination in New York City, Friday, October 12th, and in St. Louis, Monday, October 15th. Those wishing to come before this Board should communicate with Dr. W. P. Wherry, secretary, 1500 Medical Arts Building, Omaha, Nebraska.

\* \* \*

The following resolutions were passed by the members of the Lake County Medical Society at a meeting held in Eustis, April 21st:

"In the death of Dr. W. P. McKee this society and community has lost one of the old guards of



pioneer physicians. Dr. McKee located at Pittman, Florida, some forty years ago, later moving to Eustis where he practiced his profession up to within a few weeks of his death, in a noble and inspiring manner.

"He was a courageous physician, charitable to the needy and an untiring worker. By his early efforts, the Lake County Medical Society came into existence and he has remained through all the years an ardent worker in this organization, having held at various times each of the several offices in the Society, and under his able leadership as president, saw his efforts rewarded and our organization well founded and striving to live up to his ideals of a Society.

"By all those who knew Dr. McKee, he was loved and held in greatest esteem. He was one of the oldest among us and his pleasant personality and good humor made his friendship desired by everyone. The medical profession has suffered a definite break in its ranks which will be difficult to fill."

\* \* \*

Dr. L. B. Mitchell of Tampa sailed from Montreal for Liverpool June 7th. From Liverpool Dr. Mitchell will go to Paris to join the Interstate Post-Graduate Medical Association of North America. He will attend the clinics in Berne, Munich, Vienna, Prague and Berlin. He expects to return home about the first of October. Dr. Mitchell is accompanied by Mrs. Mitchell.

\* \* \*

Dr. Ralph Greene, Jacksonville, in his capacity as Lieutenant-Colonel Medical Reserve Corps, has been detailed to a tour of duty at the School of Aviation Medicine, Brooksfield, San Antonio, Texas. Dr. Greene will be remembered as the pioneer flight surgeon and is said to be the first physician to have undertaken a study of the medical aspects of aviation by actually going into the air. The original studies were conducted at San Antonio during the Mexican Border concentration of troops in 1916. As the result of the aerial observations made at that time, it was deemed advisable to establish a special school for the training of medical officers for the duty of examining aviators. Dr. Greene has been given official credit for the initial movement resulting in the present School of Aviation Medicine which is said to be the only one in existence.

\* \* \*

Dr. J. L. Kirby-Smith announces the removal of his offices to 511-13-15 Greenleaf and Crosby Building, Jacksonville.

The Hillsboro County Medical Society enjoyed a picnic at Indian Rocks Beach on the afternoon of June 28th. The entertainment consisted of vaudeville acts, dancing and a picnic dinner which was prepared and arranged by the Hillsboro County Woman's Auxiliary. About fifty doctors and their families attended and the occasion was very much enjoyed.

\* \* \*

For the first time in the South there will be held a medical association whose procedure is unique and of remarkable interest. The Interstate Post-Graduate Medical Association of North America will meet in Atlanta, Georgia, October 12th to 19th, inclusive. This association in 1926 met in Cleveland, Ohio, where nearly 5,000 practicing physicians were registered. At the Kansas City meeting last October, 5,200 were registered. Those who come to this remarkable sort of medical meeting will really be given a post-graduate course by the leading medical men of this country and abroad. The daily meetings are held from 7 a. m. to 1 p. m., from 2 to 5 p. m. and from 8 to 10 p. m. Every one who has attended these meetings has been amazed by the magnitude of the work done, by its quality, by the number of distinguished guests and by the remarkable interest aroused. It is hoped that every physician in the southern states who can possibly do so will plan now to attend this meeting. The only charge imposed on physicians who are in good standing in their county, state and national organization is a registration fee of \$5.00.

\* \* \*

The Putnam County Medical Society held its regular monthly meeting at Crescent City, July 4th.

\* \* \*

The following members of the Escambia County Medical Society attended the last monthly meeting of the Walton-Okaloosa County Medical Society held at DeFuniak Springs: Drs. John Bell, C. J. Heinberg, John Carter, Herbert Bryans, Don Frazier, M. A. Lischkoff and W. C. Payne.

\* \* \*

Dr. H. B. Jenkins has taken over Dr. L. W. Martin's practice at Punta Gorda while the latter is doing post-graduate work in eastern clinics.

(Continued on page 42)

## MEETINGS

County Society	Secretary	Date	Time	Place	Luncheon?	Dues Paid.
Alachua .....	J. L. Summerlin, M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	81%
Bay .....	D. M. Adams, M.D., Panama City.					100%
Bradford .....	Seeber King, M.D., Lake Butler.					67%
Brevard .....	I. K. Hicks, M.D., Melbourne.	Varies		Varies		79%
Broward .....	Leigh F. Robinson, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	85%
Columbia .....	P. C. Farnell, M.D., Lake City.	1st Monday.	7:30 P.M.	Chamber of Commerce	No.	100%
Dade .....	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	69%
DeSoto-Hardee-Highlands ...	C. H. Kirkpatrick, M.D., Arcadia.		8:00 P.M.	Varies	No.	94%
Duval .....	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Arnold-Edwards Auditorium	No.	96%
Escambia .....	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	84%
Hamilton .....	R. A. Barnett, M.D., White Springs.					
Hillsboro .....	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	City Hall	No.	84%
Jackson .....	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	100%
Lake .....	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes.	80%
Lee .....	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	53%
Leon-Gadsden-Liberty-Wakulla-Jefferson.....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	96%
Madison .....	Geo. O. Davis, M.D., Madison.					100%
Manatee .....	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	74%
Marion .....	J. L. Chalker, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	75%
Monroe .....	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	86%
Orange .....	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	85%
Palm Beach ...	S. W. Fleming, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Monterey Hotel	Yes.	76%
Pasco-Hernando-Citrus.....	T. F. Jackson, M.D., Dade City.	2nd Tuesday	8:00 P.M.	Varies	Yes.	100%
Pinellas .....	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Fla. Art School	No.	100%
Polk .....	Geo. C. Overstreet, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	75%
Putnam .....	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	82%
St. Johns .....	J. M. Irwin M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeechobee-Indian River-Martin.....	C. L. Davis, M.D., Okeechobee.					83%
Sarasota .....	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	93%
Seminole .....	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		93%
Sumter .....	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	60%
Suwannee ....	W. C. White, M.D., Live Oak.					100%
Taylor .....	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia .....	R. L. Miller, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	84%
Walton-Okalooosa ....	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%

### CHARLES BRAXTON McKINNON.

After a long illness, Dr. Charles Braxton McKinnon, a descendant of the old Scotch families that settled Walton county more than 100 years ago, died at DeFuniak Springs, Saturday, June 9, 1928. He was the son of Colonel Neil J. McKinnon, a veteran of the Civil War, and his mother, Bell Ann, was a daughter of Colonel John L. McKinnon, who commanded a regiment in the Seminole Indian War. Dr. McKinnon, himself, was regimental surgeon of the First Florida Infantry in the Spanish-American War and practiced his profession in Pensacola for a few years just prior to 1898. Until stricken by illness, he was active in political and civic life, and was an elder in the first Presbyterian Church at DeFuniak Springs. Besides his wife, he leaves two sons, Charles Braxton, Jr., and Gerald; two daughters, Gwendolyn and Emmabelle, and a large number of kinsmen throughout West Florida.

J. H. PIERPONT, M.D.,  
*Necrologist.*

The Volusia County Medical Society held its annual picnic at DeLeon Springs June 12th. About twenty-five members, their wives, children and a few friends, made up an attendance of seventy-five.

\* \* \*

The regular monthly meeting of the Broward County Medical Society was held at Fort Lauderdale June 8th. Preceding the meeting, a dinner was served at the Angelus Club. Guests invited to read papers were Doctors G. R. Holden, N. M. Heggie, Robert McIver and Shaler Richardson of Jacksonville. The members of the Dade County Medical Society were invited to attend the meeting.

\* \* \*

Dr. John H. Mitchell, who for the past year has served on the resident staff of the St. Luke's Hospital of Jacksonville, announces the opening of offices in the Professional Building, Jacksonville. Dr. Mitchell will do general practice.

\* \* \*

Dr. and Mrs. W. S. Miller of Palatka are spending some time in New York where Dr. Miller is doing post-graduate work in surgery.

(Continued on page 41)

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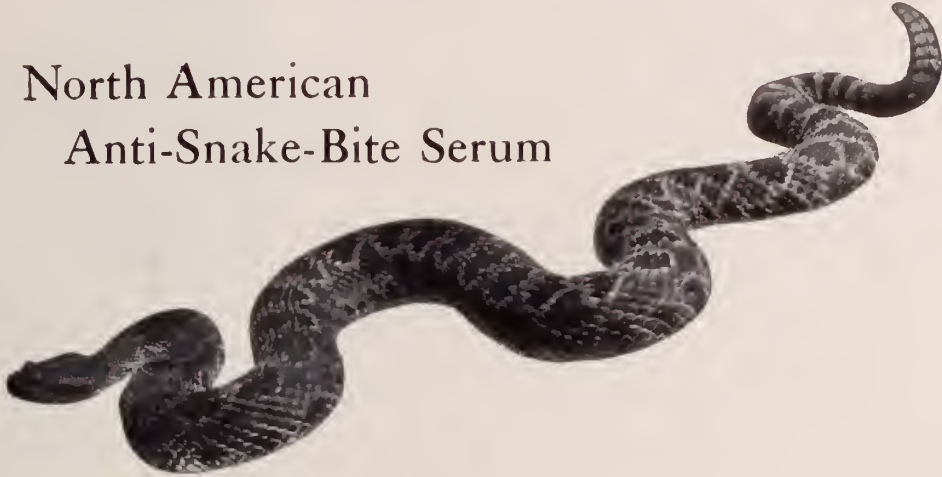
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Dr. John D. Gable of the United States Veterans' Bureau Hospital, Lake City, spent two weeks of the past month in Anniston, Ala., on active duty as major in the U. S. Army Medical Reserve Corps.

\* \* \*

Dr. and Mrs. J. H. Pierpont of Pensacola have just returned from Lexington, Va., where they attended the graduating exercises of the Washington and Lee University, their son, Andrew Warren Pierpont, being a graduate.

\* \* \*

The De Soto-Hardee-Highlands County Medical Society held its last monthly meeting in Sarasota, June 12th. Dr. G. W. Withers of Sarasota read a paper on "Congenital Pyloric Stenosis."

\* \* \*

Dr. George A. Lassman of Tampa recently spent three weeks in New York City doing post-graduate work.

\* \* \*

Dr. R. B. Harkness of Lake City attended the recent international convention of the Rotary Club held at Minneapolis, following which he is touring the Pacific Coast. He expects to return to Lake City about August 1st.

\* \* \*

The Volusia County Woman's Auxiliary was recently organized at a meeting held at the home of Dr. and Mrs. J. E. Taylor of DeLand. The following officers were elected: president, Mrs. J. E. Taylor, DeLand; vice-president, Mrs. Ralston Wells, Daytona Beach; secretary-treasurer, Miss Martha West, DeLand.

\* \* \*

Dr. M. B. Herlong of Jacksonville was recently elected chairman of the city commission. For several years Dr. Herlong has served as health commissioner of Jacksonville.

\* \* \*

Dr. O. W. Gardner of Greensboro recently attended a meeting of the alumni of Emory University in Atlanta.

\* \* \*

Dr. N. A. Upchurch, city health officer of Jacksonville, was recently elected president of the Food and Drug Officials of the southeastern states.

\* \* \*

Dr. E. C. Levy of Tampa recently returned to Richmond, Virginia, after having served for three years as chief health officer of Tampa.

(Continued on page 46)

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Dr. S. R. Norris of Jacksonville, who has been spending several weeks in Philadelphia and New York, recently returned home.

\* \* \*

At a recent meeting of the St. Lucie-Okeechobee-Indian River-Martin County Medical Society held at Vero Beach the following officers were elected for the ensuing year: president, Dr. J. A. Newnham, Stuart; vice-president, Dr. E. B. Hardee, Vero Beach; secretary, Dr. C. L. Davis, Okeechobee.

\* \* \*

The next meeting of the State Board of Medical Examiners for the State of Florida will be held in Marianna, November 12th and 13th, 1928.

\* \* \*

The Lake County Medical Society held its May meeting, Thursday, May 1th, at the Whitehouse Restaurant, Eustis. Ten members were present. Following luncheon, Dr. Walton M. Lott, Clermont, read an interesting paper on "The Diagnosis of Pulmonary Tuberculosis" and discussion followed. At the June meeting Dr. H. G. Holland of Leesburg read a paper on "The Indications of Blood Transfusions."

\* \* \*

The second bi-annual meeting of the Florida East Coast Medical Association was held at Miami, May 31st and June 1st.

This society is in its infancy as yet, but from all indications it gives promise of developing into a very lusty youngster following weaning time, which will be the first of the coming November, at which time it will be about one year old.

Miami is to be congratulated upon the success of the meeting, and all who attended were surprised at the excellence of the surgical and medical clinics held at the Jackson Memorial Hospital on the afternoon of May 31st. Preceding the clinics, the physicians of Miami gave an enjoyable luncheon at the hospital to the visiting doctors and their wives. Clinics were also held at the Allison Hospital, the Gowdy Hospital and the Victoria Hospital.

Those who performed operations and gave demonstrations at the Jackson Memorial were: Drs. Walter Jones, John C. Turner, John W. Snyder, John A. Simmons, R. O. Lyell, Ralph Gowdy, Thomas Hutson, C. F. Sayles, R. J. Pearson, Bascom H. Palmer, G. E. Chandler, E. C. Thomas, C. H. Kennon, E. S. Nichol, M. J. Flipse, G. H. Benton, Percy L. Dodge,

(Continued on page 48)

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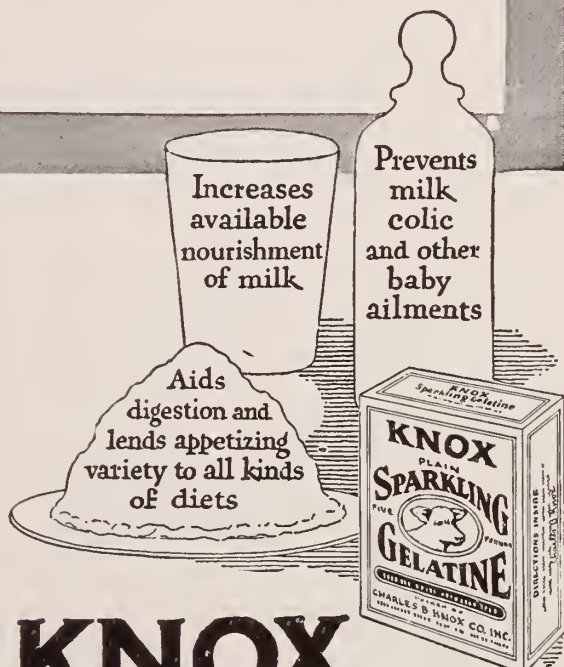
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On the evening of May 31st, a banquet was given at the Columbus Hotel, which was convention headquarters. The speakers of the evening were: Dr. Frederick J. Waas, Jacksonville, the popular president of the Florida Medical Association, and Dr. W. E. Van Landingham, West Palm Beach, Councillor for the fifteenth district. Following the banquet, a dance was held in the dining-room of the hotel.

June 1st was devoted to the meeting of the scientific section. Those reading papers before the meeting were: Drs. W. A. Oughterson, West Palm Beach; Kenneth Phillips, Miami; A. H. Weiland, Miami; Leigh F. Robinson, Fort Lauderdale; C. W. Shackelford, West Palm Beach; I. M. Hay, Melbourne; M. D. Kirsch, Miami; Frederick J. Waas, Jacksonville; Percy L. Dodge, Miami; J. Ralston Wells, Daytona Beach; R. Henry Baldwin, West Palm Beach, and James F. Carlisle, Berney S. Clay and John E. Hall, of West Palm Beach.

The Dade County Medical Society held its regular monthly meeting the night of June 1st, and all the visiting physicians were guests of the Society. Papers were read at the night session by Drs. M. P. DeBoe, Miami; Roy J. Holmes, Miami, and Elliott M. Hendricks, of Fort Lauderdale. Following the meeting, the Dade County Medical Society gave a smoker to the visitors.

The visiting ladies were entertained by the Ladies' Auxiliary with theatre and bridge parties, and all report having had an excellent time.

Dr. Waas, speaking officially, as president of the Florida Medical Association, stated that in his opinion, the formation of the East Coast Medical Association was a valuable adjunct to the state organization, as it had a tendency to stimulate interest among its members, not only on account of its promotion of scientific medicine, but also on account of having a tendency to bring the individual members into closer contact with each other. It was pointed out by him that the lower east coast had never been active in affairs concerning state medicine, and that they had taken little or no interest in the meetings of the state Association. It was also stated that the physicians along the lower east coast were practically strangers to each other, since the major-

(Continued on page 50)

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At Atlanta, Georgia

*October 12th to 19th 1928*

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ity were recent comers to Florida, and that prior to the organization of the East Coast Association, they did not know their brother physicians in adjacent towns. These two meetings have caused the doctors up and down the east coast to become better acquainted than otherwise would have been possible within twenty years.

It was voted to hold the next meeting at Daytona Beach, about the first of November. Preceding this meeting, all physicians residing within Duval and St. Johns counties will be sent invitations to attend, with the tentative purpose of having these counties affiliate themselves with the organization. Both are eligible, since they belong to the east coast.

Too much praise cannot be given the physicians of Miami for their untiring efforts in making the meeting the success that it was. In this connection, it may be stated that most of the work associated with the meeting was borne by the secretary, Dr. Roy J. Holmes. He is a "live wire," and anything that he undertakes is always carried to a successful termination. Without Roy, the east coast would never have been the success that it has. He is congenial, untiring, efficient and an all around good man. Tersely, it may be stated that he is the "works" of the Association, and to know him, is to admire him.

All physicians in good standing with the State Association are invited to attend the Daytona Beach meeting in November, since it will be the pleasure of the east coast to demonstrate to their brethren throughout the state that this is one of the liveliest medical organizations within the confines of Florida.

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BERNTON<sup>1</sup> first emphasized the value of using pollen extracts containing the pollen proteins of both the Common and Giant Ragweeds in the preventive treatment of fall hay-fever, and called attention to the great protection and greater freedom from symptoms afforded by such treatment. East of the Rocky Mountains, 85 per cent. of fall hay-fever is caused by the pollens of these two ragweeds (*Ambrosia elatior* and *Ambrosia trifida*).

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For the prevention of fall hay-fever, Pollen Antigen (*Lederle*), Ragweed Combined, is preferably administered by the Intensive Method as used with highly satisfactory results by well-known allergists and clinicians and reported by CLOCK<sup>4</sup>.

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*Literature upon request.*

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1. Jour. A. M. A., May 3, 1924, p. 1434.
2. Jour. Inf. Diseases, Jan. 1918, p. 80.
3. Jour. A. M. A., May 5, 1923, p. 1301.
4. Med. Jour. & Record, May 19, 1926, p. 641.

# THE JOURNAL

— OF THE —

## Florida Medical Association, Inc.

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### CONTENTS

PAGE

Hypertrophy of the Thymus Gland, with Report of Cases .....	67
<i>G. S. Osincup, M.D., Orlando.</i>	
Instrumentation and Operative Technique, With Postoperative Results of the Electro-Enucleating-Tonsillotomy .....	71
<i>F. Peter Herman, M.D., West Palm Beach.</i>	
Nonsurgical Treatment of Infections of the Biliary Tract .....	74
<i>Geo. P. Hamner, M.D., Tampa.</i>	
Cesarean Section, Type of Operation Indicated....	78
<i>John R. Boling, M.D., Bradenton.</i>	
The Roentgen Diagnosis of Injuries to the Vertebrae, with Special Reference to the Lumbar Region....	80
<i>Lester W. Cunningham, M.D., Jacksonville.</i>	
Lung Cancer, with a Report of Three Cases.....	83
<i>Julius C. Davis, M.D., Quincy.</i>	

Osgood-Schlatter's Disease, with Case Report....	86
<i>S. Ward Fleming, M.D., West Palm Beach.</i>	
Some Observations on the Wassermann Test .....	88
<i>Ira C. Youmans, M.D., Miami.</i>	
Internal Injuries .....	92
<i>J. C. Richardson, M.D., West Palm Beach.</i>	
Pre- and Post-Natal Care .....	94
<i>W. E. Van Landingham, M.D., West Palm Beach.</i>	
A Plea for the More Conservative and Intelligent Treatment of Gonorrhea .....	97
<i>Milton M. Coplan, M.D., and Roy J. Holmes, M.D., Miami.</i>	
Cesarean Section, with a Review of Twenty-One Cases	100
<i>Thos. W. Hutson, M.D., and J. Raymond Graves, M.D., Miami.</i>	
Editorial: Cholecystography .....	103
State News Items .....	104-110

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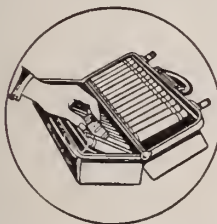
ELLIOTT P. JOSLIN M. D.

A STARTLING statement this, yet one made by no less an authority than Dr. Elliott P. Joslin of Boston, Mass. In a recent article\* he calls attention to the fact that the life span of a certain group of diabetics increased more in the last few years than the life span of a large non-diabetic insured group. This is particularly significant since the insurance company was dealing with presumably healthy individuals whereas the diabetics were handicapped at the start. This lengthening of life of diabetics Dr. Joslin attributes to the introduction of Insulin, exclaiming "He is a pretty healthy man today who can live as long as a diabetic."

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\*(New England Journal of Medicine, April 12th, 1928—page 379).

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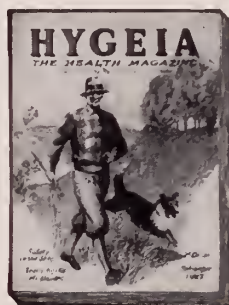
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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume XV

Jacksonville, Florida, August, 1928

Number 2

## HYPERTROPHY OF THE THYMUS GLAND, WITH REPORT OF CASES\*

G. S. OSINCUP, M.D.,

Orlando.

Recently there has been much written and published about the thymus gland, its function, size and relationship to certain symptoms frequently encountered in infants. It is not the purpose of this paper to present any new scientific data but rather to discuss briefly some of the cases showing these symptoms, and also to put before you X-ray pictures of certain cases before and after treatment.

Discussion as to the function of the thymus and the part it plays in cases of sudden death has broken out periodically over a long period of time. However, we are still largely in the dark as to whether this gland is in reality a gland of internal secretion or is concerned chiefly with the production of lymphocytes. Whether it has to do specifically with growth and development or to the production of nucleo-proteins has not been determined. Evidence has been produced which points to each of these. Certain it is, that some cases of sudden death are accompanied by a hypertrophy of the thymus gland. The fact that sudden death by accident or poisoning may also produce an enlarged thymus does not warrant us in supposing that the gland itself may not at times be the cause.

A large number of infants and children die each year after a few whiffs of anesthetic, a large proportion of these deaths are presumably caused by malfunction or hypertrophy of the thymus. Indeed, this is so frequent, that many hospitals and surgeons insist upon a picture of the thymus before undertaking any surgical procedure requiring an anesthetic and to those found to have an enlarged gland, radio-therapy is administered.

The anatomy of the thymus varies widely: it may be situated high up in the mediastinum or low down over the heart. It is surrounded by large vessels, nerves, lymphoid tissue and so forth. It may be broad and flat or long and

thick: at times the thymus shadow may blend in with the cardiac shadow.

If hypertrophied in its antero-posterior diameter the shadow may not appear broadened, but the gland may be producing symptoms through pressure on the trachea or the recurrent laryngeal nerve. This pressure on the trachea has been amply demonstrated through the use of the tracheascope, and is readily understood when it is realized that in the infant the superior thoracic opening is only two inches in diameter. The X-ray therefore does not always show us definitely hypertrophy of the thymus.

There has been in the past, and is at the present, much discussion as to the size of a normal thymus. We know that it does enlarge from birth up to two years. Some contend that from two years on it begins to involute, others that it progresses in size up to puberty. It is generally considered that the average size at birth is from seven to ten grams. Boyd in a recent article shows that the size of the thymus varies with the state of nutrition of the infant and that the average weight in the new-born, well-nourished infant is from twelve to fourteen grams—slightly higher than has heretofore been thought. Certainly a thymus weighing from twenty to thirty grams must be considered hyperplastic.

Various infections and conditions upsetting the nutrition do cause a decided diminution in the size of the thymus.

The symptoms generally ascribed to hypertrophy of the thymus are syncope, cyanosis, stridor, breath-holding, convulsions, asthma, cough and vomiting. It would seem that any of these symptoms may at times be caused by this hypertrophy and may be relieved by proper treatment.

I now propose to show X-ray pictures of subjects showing some of these symptoms:

CASE 1.—Baby B. Although the most usual symptom mentioned by various authorities is stridor, it has been my experience that those showing cyanosis, dyspnea and syncophy are encountered more frequently. This particular case has the distinction of being the second case in one family. I saw the first child ten minutes before death from a typical status lymphaticus.

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

This child was a normal delivery progressing favorably in every way up until the fifth day. I was asked to examine the infant on the fourth day as a matter of routine, the parents fearing another fatality. At that time the child was apparently perfectly normal in every respect. An X-ray was not taken as I did not recall the parents and consequently did not connect this infant with the one who had died. On the fifth day I received a rush call from the hospital and on my arrival found the patient struggling for breath, very cyanotic and almost pulseless. The elder child came to my mind immediately and the infant was rushed to the X-ray room.

Radio-therapy was administered immediately, the child made an uneventful recovery in about four hours and has shown no symptoms since that time. Several treatments were given at weekly intervals. Eight months later a picture was taken which still shows a broad thymus shadow. However, inasmuch as no symptoms had been apparent only two more treatments were given and no further trouble has developed.

CASE 2.—Baby W. Although in the past much was written about thymic asthma, this is the only case in my experience which I consider to be such. This infant was referred for asthma and upon examination showed a well-nourished infant with no abnormalities with the exception of an expiratory wheeze. There was no history of any colds, eczema or bronchitis. The blood did not show the characteristic eosinophilia. This picture shows a definitely broadened thymic shadow. One treatment gave relief from the asthma and after weekly treatments for a period of five weeks this picture was taken, which shows a decided lessening in the size of the gland.

CASE 3.—Baby D. In this infant stridor amounting almost to laryngospasm was the predominant symptom. This infant was a premature child first seen when six weeks old, at which time she weighed less than four pounds. She was cyanotic at frequent intervals which oftentimes was followed by syncope and collapse. Digestive disturbances with the formation of intestinal gas often precipitated the attacks. This picture shows a definitely enlarged thymus blending below with the heart shadow. At this time we did not fully understand the technique of the radio-therapy and although frequent treatments were given, improvement was not noted. In the effort to obtain results a full skin dose was administered which was followed by immediate

relief. Five months later this picture was taken which shows a decided reduction in the comparative size of the gland.

CASE 4.—Baby H. In this case vomiting was the predominant symptom and although there is a question as to whether the hypertrophy of the thymus was responsible for it, it was certainly coincident. This picture was taken when the baby was six days old at which time vomiting was so severe that a pyloric stenosis was strongly suspected. The picture shows a definitely enlarged thymus almost filling the superior outlet of the thoracic cavity. Weekly treatments were instituted until six were given. Vomiting ceased about the tenth day and the baby has progressed normally since that time. This picture was taken three months later and while it still shows an enlargement it is so much reduced in comparison with the infant's size that further treatments were not thought necessary.

CASE 5.—Baby F. In this infant attacks of syncope and collapse were what alarmed the parents and caused them to seek relief. The infant was six weeks old, perfectly normal at birth and had shown a normal gain and development. It had suffered two collapses. Those collapses are indeed terrifying as with no warning the infant becomes limp, colorless, pulseless and apparently lifeless. It is only infrequently that the physician sees the patient in this state of collapse as by the time he arrives the child has usually recovered and is apparently normal. The picture shows an unusually large thymus of peculiar shape, almost filling the right superior opening of the thoracic cavity. Weekly treatments were instituted for a period of six weeks and with complete relief of all symptoms. This picture shows the improvement made after three months.

#### CONCLUSIONS.

We have on record a number of other cases showing practically the same symptoms and results, but I have selected these as typical cases showing the symptoms commonly ascribed to hypertrophy of the thymus gland. I am well aware that Wasson of Denver in a recent article makes the statement that in his experience, which is probably the greatest of any authority now investigating the thymus, stridor is not due to hypertrophy of this gland and that Helmholtz in discussing Dr. Wasson's paper bears him out. They are of the opinion that in most cases it is the accumulation of mucus somewhere in the

respiratory tract that is the cause of this symptom. On the other hand well established authorities have accepted for years and still believe that stridor is the most common sign of this condition. As I stated above, it has not in my experience been the most frequent symptom displayed, but still it has occurred in a sufficient number of cases coincidentally with an hypertrophy of the thymus to convince one that it can at times be caused by the enlargement. It seems to me that practically all the symptoms commonly noted as being associated with hypertrophy of the thymus can be attributed to pressure. This pressure may be exerted on the trachea, esophagus, recurrent laryngeal nerve on the vagus. This would seem to be borne out by the fact that the symptoms are frequently precipitated by the accumulation of intestinal gas with its increased intra-abdominal tension and secondarily increased intrathoracic tension. In the cases shown you we have been unable to demonstrate any other cause for the symptom complex presented and from this fact I deduce that hypertrophy of the thymus gland can and does produce conditions demanding our attention if we are to save the lives of a certain number of infants who die yearly as a result of this maldevelopment.

Routine X-ray examination of infants at birth, as well as a routine preoperative procedure in young children will show an astonishing number of enlarged thymus glands. Radio-therapy properly employed is harmless and will certainly save a number of lives each year that are now being uselessly sacrificed.

## PART II.

### TREATMENT OF THE THYMUS GLAND IN INFANTS.

J. A. PINES, M.D., Orlando.

My part of this paper will deal more particularly with the technique used in the treatment of these thymus cases, as Dr. Osincup has already given you the clinical picture and presented several cases, which have been of particular interest to us and which have responded promptly to X-ray treatments.

It must be remembered that an infant's skin is very delicate and great care must be taken not to produce a burn; it is also important to remember the selective action of X-rays on all gland and lymphoid tissue. While the thymus gland, as we know, is located in the superior mediastinal

area and the normal sized gland weighs from about seven to fourteen grams in the new-born infant and is situated just above the heart shadow, we oftentimes find in these hypertrophied cases the shadow of the thymus extending downward and in some cases covering most of the heart shadow.

Special care must be taken to protect the suprarenal glands, pancreas and spleen, below the diaphragm, and the thyroid and parathyroid glands above the thymus, as well as the delicate skin of the surrounding area.

We have devised a lead box which we fasten to the frame below the Coolidge tube. In the bottom of this box is an oval window 8x14 c.m. This is large enough to cover the chest area of an infant one year old. We have other lead plates with windows 6x10 c.m. and 4x7 c.m., respectively, which we can put in place for smaller infants.

We place the infant on a pillow on the treatment table and pin its blanket tightly about its arms to keep them out of the field being treated. The mother or nurse sits by the child to hold it from squirming about. When everything is ready we lower this lead box over the child's chest just so it does not touch. This is much better than trying to cover the child with heavy lead foil, which is hard to keep in place and properly protect the child during treatment.

We use 130 KV or a nine-inch spark gap, five milliamperes of current, four m.m. of AL filter. Our distance is twenty inches from the target to the floor of the lead box and as we lower this box so it nearly touches the child, we have a twenty-inch target skin distance.

It requires eight minutes with these factors to give one skin unit. Two and one-half skin units is an erythema dose which is the quantity of roentgen ray necessary to produce an erythema of the skin in from ten to fourteen days after exposure.

This is what we want to avoid, so we give one-half skin unit at each treatment or four minutes with the above factors. This dose we give once each week for five weeks. As roentgen rays are somewhat accumulative in their action, we cannot give further treatments until at least a month has elapsed. We have already given twenty minutes or an erythema dose if it had all been given at one time.

The child is kept under observation during the next thirty days, but no roentgen ray treatment



should be given. We have not found it necessary to repeat the course of treatments or even to give five treatments except in one or two cases. Most of the cases have been given three treatments. At the end of this time, they have been free from symptoms. After a rest of thirty days, we take another radiograph of the child's chest and as Dr. Osincup has showed you a few of these cases, you will note the diminished size of the mediastinal shadow after the roentgen ray treatments have been given.

We are well pleased with the results we have obtained with the use of the X-ray in the treatment of these thymus cases and a host of grateful parents are liberal in their praise of what it has done for their children. In many of these cases, this has been our only reward, as the majority of them have been undernourished infants from the homes of the very poor. We feel amply repaid, however, in that we have been able to render this service to humanity and to advance this branch of medical science.

#### DISCUSSION

*Dr. J. D. Love, Jacksonville:*

This paper is delightfully refreshing in its absolute freedom from dogmatism. The author makes no unqualified remark concerning this rather mysterious malady that he might be called upon to prove. It is unfortunate that we know so little concerning the thymus. No one knows what constitutes an enlargement of the thymus nor what constitutes a normal thymus, and no one knows what is the physiology of the thymus. No one has advanced a theory that has been freely accepted and that has withstood the criticism of competent observers.

The X-ray has its value but is of comparatively little use as a diagnostic measure except as being contributory in verifying a diagnosis of thymic enlargement.

Concerning stridor, I would say if it is a manifestation of a pressure on the trachea it is unbelievable that the stridor should be only inspiratory and not expiratory as well. I am inclined to believe that the thymus as a cause of disease is largely overestimated. I believe if we were not thinking so much that the disorder under investigation was caused by this disturbance we would quite frequently find an explanation in some comparatively simple causes such as laryngeal disturbance or slight edema of the trachea.

One condition that was mentioned, holding the breath, I hardly believe is a sign or symptom of

thymic trouble. The child recovers from it too quickly to attribute it to pressure on the trachea. I rather believe this holding of the breath is due to an imbalance of that part of the autonomic nervous system that presides over the function of the larynx, and particularly the vocal cords.

Concerning "Case One" recorded by Dr. Osincup I would be inclined to doubt that all the symptoms were caused by pressure of an enlarged thymus. Dr. Osincup states that the child was given X-ray treatment and made an uninterrupted recovery in four hours. Now, we know that enlargement of the thymus is a true hyperplasia and it is unbelievable that an X-ray treatment or any other procedure could cause such a reduction in the size of the thymus as to relieve the case of all symptoms within four hours.

The outstanding feature of the paper is concerning therapy. In this there is virtual agreement. The results following X-ray treatment are simply wonderful in those cases where it is properly administered and in well established cases.

*Dr. D. D. Martin, Tampa:*

Dr. Osincup has presented a very interesting and instructive paper on a widely discussed subject, one upon which we are daily called for advice and relief. I must admit that my mind is open on the subject of thymus pathology. There are many angles to the pathology that are puzzling to me. In the case mentioned by Dr. Osincup where there was sudden recovery after the first X-ray therapy, I agree with Dr. Love. As a rule after the first and often after subsequent treatment the symptoms might be exaggerated. It is claimed that we have a temporary hyperemia and enlargement of the gland. The case mentioned I would regard as doubtful with such rapid marked changes. At the present time X-ray seems to be our most beneficial form of treatment. Of course, the dosage and methods of administration are very important factors. Dr. Pines has devised a very ingenious method of treatment with a full therapeutic dose.

Dr. Osincup has presented a carefully prepared, interesting and instructive paper which we all appreciate.

*Dr. G. H. Edwards, Orlando:*

I have possibly one hundred and fifty pictures of thyroids in infants. I have both wide ones with a thin shadow and narrow ones with a

heavy shadow and vice versa, and I can state there has been no more symptoms of thyroid disturbance from the wide ones than from the narrow ones. Many of the wide shadows have had no thymus symptoms whatsoever. I mentioned this for this reason: I happened to run in on the hospital technician when a picture was being taken some time ago. The child was held by the nurse with her arms back like this; another held the feet of a child, and the child had taken a deep breath and was ready to yell when the picture was taken. It had possibly been in this position ten seconds before taking the picture. It occurred to me that something due to the exertion of the child might have increased the size of shadow in that child. We can't depend on the shadow alone in making a diagnosis.

It occurred to me that after taking these pictures I have been working a hardship on and creating neuresthenic conditions in many mothers. Inadvertently I may have let a mother see the picture and she for the next two or three months, if there are any suggestive symptoms at all, jumps up and runs for the doctor every time the baby cries; it has ruined her absolutely for the time being, she doesn't furnish good milk on account of worry and loss of rest; so I think I have done harm to a certain extent by discussing this in some instances.

When I was in school we knew nothing about thymus disturbance whatsoever; today we hear a great deal about it, but how much we know and how much the size of the thymus influences the condition, I am not sure in my own mind. The more pictures we take the more we will find out about the diseases of children, but these pictures are only shadows, they may be very vague, and many of us endow them with tremendous potentialities regarding the health of the child. We might even construct a disease to fit the shadow.

*Dr. J. A. Beals, Jacksonville:*

It is a great pleasure to listen to Dr. Osincup's paper and the discussion that has followed.

I want to say one word from the standpoint of an X-ray man who sees and treats these cases. My viewpoint is often considered by those doing X-ray work as reactionary. It has never seemed to me that the degree of enlargement of the thymus shadow has any relation whatsoever to the severity of symptoms which are grouped as under the heading of thymic syndrome. These patients should be treated when that syndrome is definitely present; but I would like to say again,

minimize the importance of the size of the thymus shadow.

*Dr. Ross, Jacksonville:*

I am very much interested in this subject. I see a lot of these cases just as Dr. Osincup has pictured them. We know practically nothing about the thymus; we have theories; we know nothing except the one thing that these symptoms do not arise among the poor alone but in well-fed, well-nourished infants; that they are relieved by X-ray treatment; that a whole line of peculiar symptoms referable to the chest, and the mouth and throat are found, and are relieved by X-ray. We can't say positively that the symptoms are caused by the thymus; we know the single end-result is that we get good results. At the present time when I see these peculiar symptoms I practically always have my patient X-rayed.

*Dr. Pines (closing):*

In regard to what Dr. Edwards and Dr. Beals said about taking the picture of a child and getting a broad shadow, we try to make the picture in the fraction of a second and avoid a lot of that distortion. My method is to get the child as quiet as possible, allow it to relax and stop crying and then I take the picture in one twentieth of a second, with 100 milliamperes of current. I think that will avoid a whole lot of that distortion of the chest.

## INSTRUMENTATION AND OPERATIVE TECHNIQUE WITH POSTOPERATIVE RESULTS OF THE ELECTRO-ENCLEATING-TONSILLOTOME\*

F. PETER HERMAN, M.D.,  
West Palm Beach.

### INTRODUCTION.

The assumption of a specific surgical procedure produces a biased reaction. In many instances a really worthwhile improvement in technique has been lost because of such an assumption.

"In a recent meeting of the Philadelphia Laryngological Society there was discussed, 'The Tonsil Problem of the Aged.' Following this discussion, 'sensational notoriety' is said to have been given to a method of removing tonsils by electro-coagulation or desiccation which was advocated by a member during the discussion.

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

The Society passed a resolution stating that it does not officially endorse the method nor approve the publicity given the matter, and that it disclaims all responsibility for the opinions expressed in the discussion on removal of tonsils by this method."<sup>1</sup>

To the knowledge of the writer, this method of coagulation (without enucleation), has been before the profession, in an adverse position, for at least twenty years.

A high frequency current with the disbursing electrode at a distant point, is not a selector of tissue, and used in that fashion becomes a pure hit-and-miss (mostly miss) proposition, in most hands.

Bearing the above statements in mind I believe it essential to bring out the difference in the associated terms, before going on with the subject matter of this paper.

When one coagulates, he simply kills the tissue within undetermined limits, by raising the temperature at a given point, with a subsequent sloughing and scar formation.

When desiccation takes place, there is a burning at the immediate point of application, with a coagulation more distant. The two conditions are made possible by the application of a more or less current strength, the desiccation or coagulation, tending to be in the general direction of the distant disbursing electrode. The amount of sloughing is absolutely irrelevant as to tonsil or other underlying tissue, with the intermediate pain, of considerable duration, accompanied with a great amount of edema. Further, in the event of insufficient devitalization, there is a subsequent cicatrix overlying submerged tonsil tissue, with the inevitable systemic absorption. In the event of too great sloughing, there is a destruction of vital underlying structures, with the accompanying untoward results.

Dr. W. H. Taylor reports<sup>2</sup> the use of the high frequency current by way of the dissecting scissors. This method of use is far advanced over the coagulation method. However, the large, distant, disbursing electrode is used, thus directing the current into the sinus walls. With the insulated seizing forceps as used by the writer, for the latter current application, it becomes but a matter of preference of technique between it and the method herein described.

In the first work done by the writer, the large distant disbursing electrode, in conjunction with the insulated snare, was used.<sup>3</sup> Owing to the

absolute inability to secure control of the current, a modification, tending to confine all current activity to the tissue being removed, was perfected, which, with results obtained, is later described.

For the present instrument, the word "electro-enucleating-tonsillotome" has been selected, electro to identify the method from other enucleating methods; enucleating, to indicate that the tonsil is actually removed at the time of the current application, and not simply burned and allowed to slough and fall out at will, to a greater or lesser extent.

It should always be uppermost in the mind of the surgeon, regardless of what part of the body he may be working on, that the time consumed in the operation is not so much for the mere cutting or removal of the organs, but rather for the control of hemorrhage. The strictly surgical work required for the removal of both tonsils can easily be done in a moment or two, but one needs to devote much more time to hemostasis if blood be present. He who slights this most important duty will pay in a few hours, or days, following, thus being brought forcibly to the realization that the so thought, simple tonsillectomy, has taken on an extremely major aspect.

#### INSTRUMENTATION.

There will be no attempt to cover the field of indications for the removal of tonsils in this paper (this subject having been treated upon, in a measure, in paper read before this society, last year.)<sup>4</sup> Remarks will be confined to the efficiency and use of electro-enucleation in the hands of the writer.



Figure 1.

The instrument is of the fenestrum type (Fig. 1), suitably insulated so as to allow the attachment of the two electrodes, the active to the snare wire; the disbursing to the seizing forceps. The latter is placed to the distal side



of the loop, thus confining the current to the tissue being removed. This arrangement makes possible the application of a desiccating current strength without harming the underlying tissues. (The current flow is away from the sinus, into the tissue being removed.)

#### THE CURRENT.

The current used is of an undamped high frequency type, the frequency being optional with the operator. The higher the frequency, the less the coagulation and the greater the cutting

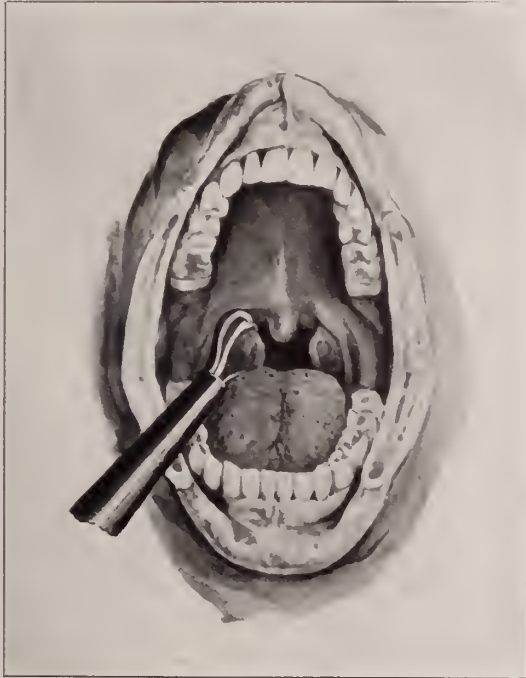


Figure 2.

property. The writer uses a frequency of about seven hundred and fifty thousand, which rate in a properly adapted electrome for this particular instrument, is a semi-coagulating-cutting current.

#### TECHNIQUE.

The primary technique, in so far as the engagement of the tonsil, is identical with any

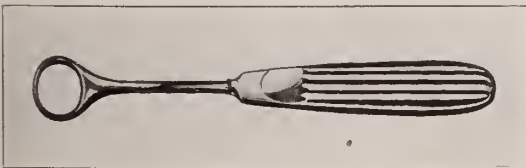


Figure 3.

other type of fenestrum instrument. After the snare has been drawn taut, the middle finger draws the seizing forceps finger grasp backward.

This movement causes the forceps to grasp the tonsil and simultaneously makes a good electric connection (Fig. 2). The current is now applied by pressure on a foot switch. At the same time the carriage is drawn backward, causing the snare wire to follow the line of cleavage be-

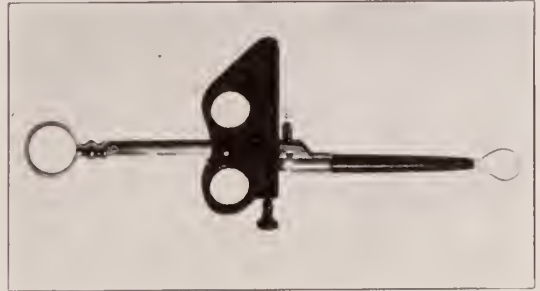


Figure 4.

tween the tunica-propria and the submucosa. The current is at the same time passing between the snare and the seizing forceps, producing a coagulating effect, with a resultant bloodless field.

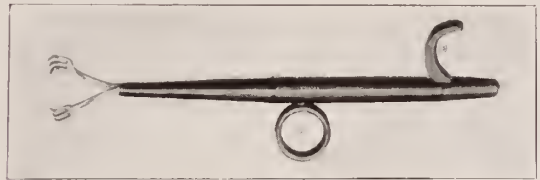


Figure 5.

There are those cases wherein the tonsil, due to its submerged, or fibrotic state, is not applicable to any direct instrumentation. For this type of condition there has been devised a unique

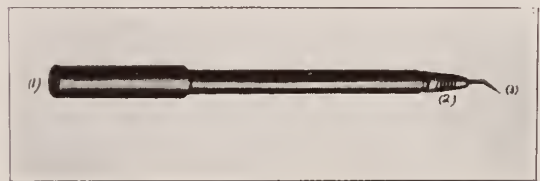


Figure 6.

instrument, by Dr. Arthur Nilsen, (Fig. 3), known as a dislocator. It consists of a thin metal loop, properly supported so as to enable one to put forth considerable applied pressure, thus breaking down the existing fibrous bands, as well as lifting the submerged tonsil from its bed. Having been thus dislodged, it is quite simple to re-engage in the electric-tonsillotome.

Notwithstanding this latter technique, there still remains (in the experience of the writer) about two per cent of all cases which are not

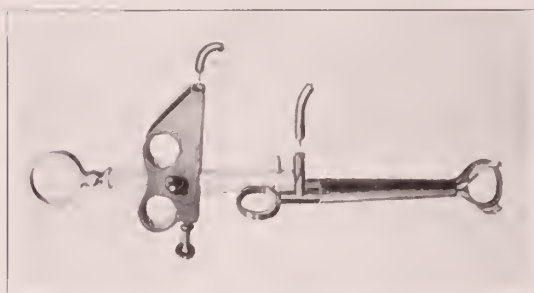


Figure 7.

applicable to any method of instrumentation. These are handled by interchanging the fenestral loop with an insulated tubular member (Fig. 4); a separate seizing forceps (Fig. 5); and the dissector (Fig. 6). With these instruments, the disbursing electrode being attached to the seizing forceps engaging the tonsil, the active electrode to the dissector, the usual technique of dissection may be carried out, followed by the free snare, to which the active electrode has been connected upon completion of the dissection. (Fig. 7).

#### ANESTHETICS.

The type of anesthetic to be used is optional. In a series of over five hundred cases, the majority have been done under a local anesthetic. Ether is used in the extremely nervous adults and all children. In the above number of cases done in private practice, there were no untoward results from the use of ether. If after complete anesthesia has been produced, the cone removed



Figure 8.

to one side, the time elapsed between the preliminary preparation and current application is sufficient for the patient to have exhaled all nascent ether.

There is left a clean unobscured operative field (bloodless). The slight searing of the sinus destroys any remaining tonsil tissue, thus preventing regrowth.

Absence of blood prevents aspiration, with its oftentimes untoward results.

The sealing of the arteries, veins and lymph spaces prevents secondary systemic infections.

The electric stimulation of the underlying tissues is thought to promote a more rapid healing, with a resultant shortened convalescent period.

A favorable psychological impression is made upon the patient owing to the absence of blood.

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#### NONSURGICAL TREATMENT OF INFECTIONS OF THE BILIARY TRACT\*

GEO. P. HAMNER, M.D.,

Tampa.

If allowed to run its natural course of weeks or months, as the case may be, the back pressure of any obstructed, or partially obstructed excretory system may produce extensive damage to the cells of the organ functioning through the system. Especially is this true of such complicated and delicately constructed organs as the liver and *pancreas*.

And such a condition indubitably sets the stage for the development of liver and pancreatic disease or dysfunction.

In my ten years' experience in dealing with congestive, infectious and obstructive diseases of the liver, gall-bladder and biliary passages from the viewpoint of especial interest and attention, it has been, of course, my observation that the more rapidly and efficiently the biliary system is opened up and thoroughly drained the more prompt and thorough will be the relief. In my hands this has been accomplished more promptly and satisfactorily with the duodenal tube, by what is commonly known as the Lyon-

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

Meltzer nonsurgical gall-bladder drainage than any other form of treatment.

In refutation of the many attacks and harsh criticisms of this method of treating biliary diseases I merely wish to call attention to Meltzer's law of contrary innervation as applied by Lyon in this method, to dilate the ampulla of Vater and the common bile duct with a solution of sulphate of magnesia (usually of 33 $\frac{1}{3}$ % strength), and thus to cause the gall-bladder to empty more rapidly and completely than by the use of cholagogues and cathartics administered by the mouth.

It will be remembered that Meltzer clearly and conclusively demonstrated in animal experimentation his law of contrary innervation, and that Lyon was the first to avail himself of it and to apply the principles therapeutically.

I was immediately interested in Lyon's initial work along this line because at the time, I was engaged in testing out typhoid convalescents in the infectious wards of an army base hospital, for the purpose of locating carriers. Incidentally two carriers were found and sent to Walter Reed Hospital for cholecystectomy. But until the publication of Lyon's results of his first work I had not used the duodenal tube therapeutically.

Not only is it rational to assume that the ampulla of Vater is relaxed or dilated, but that a portion of the sulphate of magnesia solution does actually travel along the common duct itself, as beyond any doubt the tetra-iodo phenolphthalein and tetra-brom-phenolphthalein solutions used in the Graham-Cole method of cholecystography does enter the gall-bladder to the extent of completely filling it, even when administered by mouth. And if these salts can find their way past Oddi's sphincter there is no reason why other salts even of lesser density should not, to some extent.

Bassler assumes that the function of the gall-bladder is only that of a buffer, or pressure valve to relieve distension and protect the pancreatic tissue, rather than that its primary function is that of a reservoir of bile for intestinal digestion.

In confirmation of this theory let us note that Rous and McMaster have demonstrated that the power of concentration of the gall-bladder is so great that in the normal range of function it can receive one quart of liver bile, and concentrate it down to a little over three ounces; thus preventing undue distension.

It is a well established fact that under surgical observation the deepest colored, heaviest

bile is recovered from the gall-bladder itself, either normally by expressing its contents, or when opened. How otherwise account for the presence of from one to six ounces of this darker and more concentrated bile as coming from somewhere between the common duct sphincter and the secretory liver cells?

Lyon claims that when the gall-bladder is ablated the duct attempts to assume this function by dilating. He is substantiated in this by Dubose of Selma, Ala., who declares that in twenty per cent of gall-bladder cases in which a cholecystectomy had been previously done, at reoperation there was found an enormously dilated common duct, an attempt of nature to reform a gall-bladder, and this enormously dilated common duct was frequently filled with stones or pus as in primary conditions of cholelithiasis or suppurative cholecystitis respectively.

Then to revert to the opening paragraph of this paper; if we have an obstruction or stasis in the biliary excretory system, regardless of the primary cause, there is damage, dysfunction and disharmony in the entire system, both secretory and excretory; and it behooves us to restore this function as quickly as possible.

But, it is to be remembered that in the vast majority of cases of disease of the liver and its appendages there is no obstruction, nor even a definite stasis; and the commonest of these is chronic cholecystitis, either of a simple congestive and catarrhal type or a more serious infectious character, and almost invariably complicated by a resulting hepatitis, whether mild or severe.

Fortunately the duodenal drainage is equally effective in all cases, except, of course, in those of a strictly organic character in which there is an impacted stone in one of the ducts, or occlusion by torsion, adhesions external to the duct but closing it completely, or closure from pressure by some other organ. Of course under such circumstances no relief can be expected from the duodenal tube.

The method is safe and simple, and if a little care is exercised the disagreeable feature to the patient is negligible. The procedure is carried out under as nearly aseptic conditions as possible, and as soon as the tube enters the duodenum a specimen of bile is obtained in a sterile container; then about 75 or 100 c.c. of a 33 $\frac{1}{3}$ % solution of magnesium sulphate is run in through the tube and aspiration immediately begun. This



is usually followed by a copious flow of bile which soon becomes darker in color, and in the presence of disease frequently very dark to a black color with a viscid, molasses-like consistency. A second specimen is now retained, and a third specimen as the drainage is completed. This last, which is liver bile, is of a pale, yellow or lemon color and much thinner than the former specimens.

After all the bile is obtained and the glass connection in the tube shows many air bubbles, indicating that the drainage is complete, 250 c.c. of a warm solution of a mild antiseptic prepared from Ringer's tablets glyco-thymoline, or some such preparation, is run into the duodenum and left by the removal of the tube.

The specimens are submitted to the laboratory for citological and biological study for the determination of the nature and severity of the infection, and the possible damage sustained by the bile tract and liver cells. In some cases it is well to make an autogenous vaccine from the cultures as an adjunct to treatment.

The following cases are taken at random from my records and cited to illustrate that very gratifying results may be obtained when the correct technique is maintained and the treatment is persistent and thorough, which is absolutely essential to success with the method.

CASE 1.—White male, 51. Previous history, well and robust all life until February, 1923, sugar discovered in urine. Sugar controlled by diet; no insulin given. Remained sugar free. In August same year, suffered a complete physical breakdown after a strenuous political campaign, and was hospitalized for observation with a daily afternoon temperature of 104 F. Temperature invariably subsided about midnight, remaining normal or subnormal until following afternoon when it rose to 104 again, and was uninfluenced by treatment. Patient was seen in consultation three weeks after initial hospitalization. His afternoon and evening temperature had persisted for the entire time, notwithstanding the extraction of all teeth, treatment for pyorrheal condition and constant administration of the best known febrifuges. All blood examinations were negative; and extensive radiography revealed no explanatory lesions. Graham-Cole examination, however, was not done.

A gastric analysis now showed a complete achylia gastrica, and bile specimens obtained with the duodenal tube were scanty, of a dirty

yellow color, and about the consistency of thick buttermilk. Incubation showed a heavy growth, many colonies, of colon bacilli.

Immediately following this first drainage a slight decline in the temperature was noted, and after a second drainage on the following day, dropped to 102. After the fourth drainage it was normal and remained so.

This man had been pronounced a diabetic and was then on a very rigid diet. During his three weeks' illness he had reached such a stage of debility as to be helpless. His physicians strongly opposed the free carbohydrate dietary advised notwithstanding that he was sugar free. A compromise was effected, and a fairly liberal dietary instituted, with a daily urinalysis. His condition improved rapidly, and against our advice he left the hospital in ten days from the date of the first drainage.

Treatment was kept up on alternate days and later twice a week until he had had twelve in all. The bile now appeared normal, though a few scattered colonies of bacillus coli appeared on culture. As he had regained 22 lbs. lost during his illness, and seemed to be in good health, drainage was discontinued and he reported once a week for observation.

Six weeks later a second gastric analysis was made and gastric secretions found to be normal.

He was now on a general diet with all the carbohydrates he desired, but much against our advice he was taking large amounts of cane sugar and its products, of which he was exceedingly fond. He has remained sugar free, however, for three and half years.

No medication was resorted to in this case while under my service except dilute hydrochloric acid for the time he was without the natural product.

CASE 2.—White female, 60. A cholecystostomy eight years ago and four large gall-stones removed. Relief for two years when attacks of colic returned. Second operation January, 1925, under intensely jaundiced condition. Gall-bladder full of stones and was removed and drainage instituted. Partial relief from pain, but jaundice, nausea and vomiting persisted for eight weeks. Operative wound had made a number of attempts to close, and did for two or three days, when all symptoms were aggravated until bile again broke through and relieved the back pressure. Patient was seen in consultation at this stage, and was able to retain but little

nourishment. Duodenal tube was given and a very small amount of thick turgid bile obtained. Incubation showed heavy cultures of bacillus coli.

Three successive attempts to drain with the tube resulted in failure. The tube then was introduced in the evening, secured to jaw with adhesive and left in position all night. Drainage began about midnight and continued until seven the next morning, draining out about 1500 c.c. of thick, ropy bile, which contained two plugs of lymph-like substance, about  $\frac{3}{4}$  inches in length, moulded round and tortuous as if they had remained for some time in a spiral tube. The inference was that the common duct had been thrown into a tortuous course by adhesions and had become plugged with lymph, or tenaceous mucous. Subsequent drainage was easily accomplished, the wound healed permanently and the jaundice and other symptoms rapidly subsided. Eighteen months later when seen, the patient had remained free of symptoms, had gained twenty pounds, and her diet was no longer restricted, but she ate anything she desired.

CASE 3.—This was a unique case, and the only one of its kind in my experience; and without precedent in the literature on gall tract diseases so far as I have been able to ascertain.

A young man of 25, a shoe cutter by trade, had been treated for stomach trouble for several months. His chief complaint was sharp pain in right side over the region of the duodenum, from one to three hours after meals.

X-ray showed stomach normal in outline, no retention and a normal cap. As the duodenum filled, however, there appeared an indenture as if a firm mass about the size of a large English walnut was impinging from the outside and causing the lumen to appear half closed. Duodenal drainage was done, about 120 c.c. of black, viscid bile recovered and a barium meal given immediately. Both fluoroscopic and plate examination showed that the duodenum had regained its normal contour. Three more treatments were given at 2-day intervals, but from the first drainage no further discomfort was experienced. An explanation of his symptoms suggested by the roentgenologist that the pressure of a distended gall-bladder on the duodenum formed a trap as it were, that resisted the passage of food, gases and peristaltic waves, seems logical in this case.

This man has remained well and gained weight for the past three years.

CASE 4.—White female, 60. Cholecystectomy eight months ago with only a few months' relief, when she became intensely jaundiced with all the attendant symptoms. She was advised against a second operation by several surgeons. Upon conferring with the operating surgeon he informed me that though he saw no evidence of malignancy at the time of operation, he now strongly suspected a malignant liver.

She had five nonsurgical drainages, which, supplemented by gastric lavage for the distressing nausea and vomiting, gave complete relief from all symptoms, including a systolic blood pressure of 210 m.m. and, with the exception of an occasional slight rise in her blood pressure, she has remained in good health.

CASE 5.—B. F., white male, 37.—Became suddenly jaundiced in March, 1926. Referred to Mayo clinic July same year. Duodenal drainage attempted several times with the tube but without results. Operation advised, but he was told frankly by C. H. Mayo that it would be purely exploratory as no definite cause for his icterus had been determined. Did not accept operation, and came home. He returned to Rochester in late summer for the operation, but as his condition showed improvement he was treated by rest and a high carbohydrate dietary. Improvement was gradual and he became almost free of jaundice and the accompanying symptoms. He remained in fairly good shape until November, when he became intensely jaundiced again, with nausea, vomiting, and occasional chills and rise of temperature. He was also extremely neurotic.

Patient was seen by me on December 18th and use of the duodenal tube begun. There were many attempts to clear the obstruction or stasis, that were complete failures, then occasionally we had a partial success. After eight or ten weeks of persistence our efforts were rewarded by copious drainage through the tube. Improvement was now rapid, he gained weight, and was practically clear in five or six weeks. He has had two slight relapses since July, 1927, due to dietary indiscretion.

Recovery from the first relapse, while on a trip away from the city, was made by rest in bed and strict diet. The second was relieved in a few days by the use of the tube, and without confinement to bed.

The cause of this man's protracted icterus was never determined. He probably has a permanent damage to the liver cells that may give him further trouble with any indiscretion in diet or habits.

CASE 6.—E. H., white male, 68. History of "bilious attacks" with pain and tenderness over liver and gall-bladder area and below right lower ribs, accompanied by severe headaches, dizziness, nausea and vomiting for the past ten years. Also has had multiple arthritis for the same length of time. Joints always swollen and more tender during the "bilious attacks."

Bile obtained by duodenal method very thick with mucous and pus. Many heavy colonies of bacillus coli on culturing.

After six duodenal drainage treatments there was very little pus and only scattering colonies of colon bacilli. The patient was first seen on April 21, 1927, and on May 7th, after ten drainage treatments, the bile appeared clear and free from pus. No culture was made. The patient has remained free from symptoms; though some of the arthritic joints still show some swelling, but no pain or inconvenience is felt now and the condition of these joints seem still to be improving.

#### SUMMARY.

1. Nonsurgical bile tract drainage has won a merited place in therapeutic measures.
2. Persistence and proper technique is essential. Slipshod methods will not obtain results.
3. It is a safe procedure in cases of poor surgical risk.
4. It can be safely and successfully used in the private office without loss of time to the wage-earner.
5. It seems equally as effective in cases in which the gall-bladder has been ablated as in primary cases; and is therefore a valuable adjunct to surgery of the upper right quadrant.

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#### CESAREAN SECTION, TYPE OF OPERATION INDICATED\*

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For centuries the procedure of removing living baby from the womb of the mother has been much discussed. There has been great advance since that long-ago day of the "lex regia," later known as "lex cesarea." This law was made in 715 B. C. to remove from the womb of a dying mother the child with the hopes that it might live. Probably long before this the primitive people took some such step. As far back as the year 1500, there is on record the case of a woman named Nufer, who was long in labor and despaired of by the midwives, was delivered by a swine spayer by the abdominal route and lived. Authorities doubt this being Cesarean but delivery of extra uterine child, and it was not until 1610 that they first accepted report of true Cesarean.

In 1876 Dr. Harris of Philadelphia gathered statistics showing that the mortality of abdominal delivery was 84%. It was in this year that the first real progress was made, Porro's supravaginal amputation of the uterus proving a great safeguard and opening up a new field for the safety of the mother. Prior to that she had been expected to and did die.

In 1888 Saenger did the first conservative section now known as the classical. Since that time there have been numerous types described.

The development of the extraperitoneal Cesarean as first described in 1907 by Frank of Cologne and its modification by DeLee, Beck and others, was another real forward step, offering a far safer way of delivery of possibly contaminated cases. It has taken many years for this procedure to take its proper place with the average operator, the Saenger operation by far predominating.

With the development of aseptic surgery, there has been such a continued increase in the number of Cesareans until it has become a menace. Because of the ease with which it is done and its spectacular nature, any case, no matter how long in labor, infected or not, was operated. As a result there has been a great furor raised against the operation and the pendulum of popularity has, within the past year or two, swung the other way.

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.



Fortunate, too, that this has occurred, because it brings us up sharply against the fact that this is not a panacea for all obstetrical ills. The pendulum, I believe, has reached the apex of the back-swing, and with greater care in selection of our cases and the type of operation, the mortality will decrease.

During the past year the subject of Cesarean has been much in print, a great deal of the discussion being derogatory. Not but that all agree that the operation has its indications, but that it is often done where some other procedure would be more suited. The mortality is too high certainly, but one must take into consideration that it is not the operation per se, but the fact that it is done so often in last resort cases with high mortality by any method of delivery.

Statistics are easy to work with. They can be used to prove almost anything according to the way handled. In Cesarean section the mortality ranges from about 1% in selected cases to as high as 30%, the average being about 10%. However, Mosher<sup>1</sup> quoted Newell's survey of hospitals within a radius of 40 miles of Boston revealing mortality of 100% in 100 Cesareans. Astounding to say the least.

The earlier the surgeon and obstetrician come to realize that this is one of the conditions that requires more judgment than skill, judgment in the type of case and in the type of operation, the earlier will the mortality rate be lowered. Practically all the statistical reports to this date are those of the classical Cesarean, the most dangerous of all if used as routine.

There are numerous types of abdominal methods of delivery, all of which can be classified under the head of classical or high, cervical or low, and the Porro.

It is in the selection of the type of operation to be used that the best of judgment is to be exercised. One of the three mentioned types offers a comparatively safe way of delivery for most dystocias. There should be no cut and dried routine for any condition, especially is this true of conditions indicating Cesarean section. As I have said before, judgment is needed more than skill here.

The Saenger, or classical operation, is rapid and very spectacular—a few quick incisions, a rush of blood and a baby in a little more time than it takes me to say it. That is fine if the uterus and its contents are free of contamination. If not, the results may be, and often are, disas-

trous. It is the use of this type of operation indiscriminately that has been a big factor in the high mortality following Cesarean. It is not the knowledge that infection is present, but the possibility of any contamination that should warn against this type of operation. Let me emphasize this by saying that any case, no matter how free of evident infection, that has been exposed to contamination by vaginal examination should not have classical Cesarean section.

The low or cervical section, although not so spectacular, nor so rapid, nor so easy, offers great advantages in the potentially contaminated cases. Not the frankly infected, but those in which there have been vaginal examinations. It is not seldom one sees a case that has examination made under the best of precautions by accoucheur who is careful of his technique. It may seem that this would be safe for classical section. This is not so however. If there is any possibility of contamination, the low section is indicated. The more cervical and the fewer classical sections we have, the lower the mortality will be.

DeLee,<sup>2</sup> Polak,<sup>3</sup> Henkle<sup>4</sup> and many others have devised various types of low section. We favor the operation of Kroenig, in which, after opening the abdomen through a low medium incision, the peritoneum is incised transversely across the uterus at the reflection of the bladder. The bladder is then pushed down off the lower segment of uterus and the upper peritoneal flap is easily pushed up towards the body of uterus. Pad is tucked in about upper margin of wound and a longitudinal incision made through thin wall of uterus, there being little bleeding at this site. The head of baby is then guided out of opening by use of one or both blades of forceps and baby delivered. We then deliver placenta and uterine wall is closed by two rows of chromic catgut. Following this the transversely cut peritoneum is sutured which makes the uterine wound extraperitoneal. There is little chance for soiling as gut is usually not even seen and pad at wound margin caring for the spill. Broadhead<sup>5</sup> goes so far in this operation to suture the peritoneal flap of uterus to that of anterior abdominal wall. We believe, however, that with use of pad, as described, that spill is well cared for.

The third type is modified Porro, this being used in any frankly infected case or one in which any great amount of vaginal operative procedure has been done. The indications for this are becoming fewer and for the cervical type more

frequent. This operation takes but little more time than the classical type and the loss of blood and shock is about the same. Following amputation of the fundus, the cervix is sutured and peritonized as after any hysterectomy and dropped back in abdomen instead of being sutured into abdominal wound as advised by Porro. Their patients as a rule do beautifully. The convalescence, as a routine, is smoother than following classical operation. This is because in the latter type the abdomen is inflicted with large boggy mass for many days which seems to cause more distention and distress.

Being so impressed with the difference in the immediate postoperative condition of these cases, I wish to suggest for your criticism a procedure I am going to try. Eclampsia, as we know, gives the highest mortality of any condition occurring during pregnancy. The mortality is high no matter what method of delivery is followed. Most authorities agree on the use of magnesium sulphate intravenously and if convulsions are not controlled in six hours, to do Cesarean. Realizing that the uterus is not the seat of the toxemia in eclampsia, this being liver or kidneys as case may be, but also appreciating the fact that there is certain amount of toxemia in this big body and also knowing that the postoperative condition is smoother following its removal and the shock no greater, I am going to do a modified Porro in the next eclampsia in a woman who has other children and can spare the uterus. This may seem drastic but it may be just enough to throw the scales towards safety. I hope for discussion and I no doubt will hear it on this observation.

During the past two years since we began the low Cesarean, we have done 23 Cesareans—only a small number but enough to get some idea of fitness of different types of operation.

These operations are grouped as follows:

<i>Classical Operations</i> .....	13
Contracted pelvis .....	6
Premature separation of Placenta .....	1
Eclampsia .....	4
Placenta previa .....	2
<i>Cervical</i> .....	7
Eclampsia .....	1
Breach—30-hour—no dilatation .....	1
Contracted pelvis—test labor .....	3
Placenta previa .....	2
<i>Porro</i> .....	3
Contracted pelvis—in labor 40 and 48 hours..	2
Placenta previa, temperature 101. ....	1

Of this group we had one death. The eclampsia in the cervical group died. She had magnesium sulphate intravenously—three injections.

This gives a mortality of 4.3%, but of this we

had ten cases that were not good risks from classical standpoint. There were no deaths from infection.

#### SUMMARY.

Cesarean mortality is too high, not so much because of too many Cesareans, but because the type of Cesarean used is at fault. Improvements in technique have now reached such a stage that indications have been much increased. I know that Cesarean is safer both for mother and child than high forceps, both from mediate and immediate standpoint. The classical operation to be done only in very selected cases. If this be done, there will be no deaths from infection. The cervical operation will prove the most universal type.

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#### THE ROENTGEN DIAGNOSIS OF INJURIES TO THE VERTEBRAE: WITH SPECIAL REFERENCE TO THE LUMBAR REGION.\*

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Jacksonville

In the past several years I have been impressed with the increasing frequency of injuries to the spine and especially to the lumbar region which is the area most often involved. These injuries occur to all portions of the spine, but I shall deal with the lumbar region only.

The present day automobile, driven at high speed, accounts for many accidents with injuries to the spine. Industrial accidents also produce a considerable number. The injuries from the automobile are steadily increasing. I have made no effort to work up a statistical survey but have collected a number of cases from the work in our office and from the services of St. Vincent's and Duval County Hospitals.

The history indicates that such an injury in an automobile collision is produced by the individual being thrown against the top of the

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car with bending violence. These patients complain of a "lame back" which is too frequently diagnosed a "sprained back." Many with fractured spines actually *walk* into the office of the roentgenologist. Some come late, seeking the reason of a kyphotic deformity and disability. Fractures of the spine may involve the vertebral bodies, the lamina, the spinous processes, or may be combined with a dislocation. Excepting fractures of the lamina, they are readily demonstrated on the X-ray film.

The type of injury most often seen is a compression fracture of one of the bodies of the vertebræ. It is very seldom that one sees an injury to more than one vertebral body. Occasionally, but quite infrequently, one may encounter such an unusual injury. For example: the body of the first and third lumbar will show a fracture with the body of the second uninjured. Fractures of the transverse process are common and generally the results of direct violence to the area involved.

Kummel's disease is really the late results of a compression fracture of the vertebræ in which a kyphotic deformity is present with symptoms of lameness and nerve pressure.

Film study of many spines in the course of routine examinations of the urinary tract, gall-bladder region and other areas have shown changes from the normal which are undoubtedly due to age, posture and occupation and do not give rise to symptoms. These changes incident to age, posture and occupation must not be confused with those the results of trauma. Variations in the spine from congenital failure of development are quite commonly seen with no symptoms and these must not be confused with injuries.

The early and prompt examination of the injured spine will show such changes and differentiate them from the results of trauma. Later, such differentiation will be extremely difficult. The legal aspect as well as the aim of careful and accurate diagnosis indicates the wisdom of a careful roentgen study of the spine in its entirety if possible; certainly the area with the symptoms should be examined.

In the roentgen study one should always have the antero-posterior and lateral films. The antero-posterior will give more information if stereoscopic. The films must be of good detail and are preferably made with the Bucky diaphragm. One should remember that in recent

injury a large hemotoma may be present, or the soft tissues may be markedly swollen, and if so, brilliant contrast and detail can not be secured such as is obtained in films made in the late stages of such injuries. This is no excuse, however, for not securing good diagnostic detail when the Bucky diaphragm is used and the patient properly immobilized. I must stress the necessity of the lateral film as some of these injuries will only be seen in that view.

I personally feel that fractures of the spine should be rigidly immobilized for several months. Following such an injury the bone structures of the spine have their lime salts absorbed and become softened. It will be a number of months, depending on the severity of the injury, before the lime salts are redeposited in the bone and it fully repairs itself. Weight bearing and pressure on the bodies of the vertebræ during the period of softening is bound to result in deformity. Such deformity may result in permanent symptoms.

#### DISCUSSION.

*Dr. J. C. Dickinson, Tampa:*

Dr. Cunningham has emphasized the absolute necessity of lateral films in cases of back injury, and I do not think this can be over-stressed. It is not uncommon in a given case of injury to a lumbar spine that the amount of injury demonstrated in the antero-posterior film is not great, but when a lateral is obtained the deformity may be very much greater than has been anticipated.

It is sometimes difficult to obtain satisfactory lateral films, particularly in those cases in which there are multiple injuries making it extremely difficult to turn the patient on the side, such injuries as fracture of the pelvis, crushing injuries to the chest, injury to the shoulder, etc. In such cases it is possible, by blocking the patient up on pillows, to use a portable machine and obtain a satisfactory film without turning the patient. Such films are not beautiful but they can be made diagnostic.

Fractures of the transverse process are commonly overlooked, and I think this accounts for many of the lame backs that do not recover satisfactorily.

Another fracture which I think often goes unrecognized is one of an osteophyte some place along the spine in a patient who has chronic hypertrophic arthritis. What would ordinarily amount to a trivial injury may, in this type of patient, result in a prolonged period of disability.



*Dr. F. L. Fort, Jacksonville:*

While you are treating back injuries, I want to impress upon you that you can not afford not to have good pictures; I mean by that, good antero-posterior and lateral views of the spine. That is the only way you can tell. For instance, we will take a case of traumatic neurosis of the spine. To all intents and purposes they have a serious injury, but it would be a very serious mistake to treat them as if they had a bone injury. Only with good X-rays can you be positive when you have such a case. And when you have "compensationitis," as some of them do, how are you going to tell without good pictures? I would like to say, poor pictures of the spine are in general worse than none at all; certainly in my experience. You have not done all you can do until you have lateral views. Besides the traumatic neurosis, there are two or three other things in which X-ray aid is well nigh indispensable; for instance, a severe injury with compression fracture, not necessarily paralyzed in the beginning. But every broken back is potentially liable to develop paralysis if left untreated. You must do your laminectomy, if you do at all, within 72 hours to get results. Only with good X-ray pictures can you determine when your laminectomy is indicated. And I say again, have both antero-posterior and lateral views to determine whether to do that laminectomy or not.

There is another type of spine injury horribly treated in the past, but I hope not so badly in the future. That is the so-called compression fracture or "Kummel's disease, in which the film shows slight packing down of the cancellous bone of the vertebra. In many cases they are overlooked. The patient keeps on having pain and goes from one doctor to another and nobody can make a correct diagnosis until the kyphosis occurs.

Now I will close by saying again that I insist on antero-posterior and lateral views, because you will often regret it if you don't, and you can't explain to a jury why you didn't have pictures, when somebody else finds a fracture you didn't.

*Dr. G. Raap, Miami:*

The men who have discussed the paper have brought out the necessity of lateral films. This discussion resolves itself into a matter of discussion of technic among the roentgenologists, but I believe it is a good thing for the general prac-

titioner to know how many pitfalls there are in an examination of this type. Some time ago I had a case which illustrated this very forcibly. Dr. Cunningham brought out the fact that a great majority of these injuries result in a compression of the body of the vertebra; that is true, I believe, in almost 90 per cent of these cases. There are, however, certain areas about the spine that are certainly very difficult to show, even with the best of X-ray films. I am speaking now of these cases in which the lamina are injured and the articulating structures behind the body of the vertebra and for this reason, although it wears out X-ray tubes very rapidly, I have been in the habit lately of making several lateral films and varying the technic so as to bring out in some of them the body of the vertebra more distinctly and in others the surrounding structures. In two of these I showed fractures at the bases, or anterior ends of the spinal processes, just where the two of them joined the body. Both of these had been observed before and the fractures not found on account of lateral films being made to show the bodies of the vertebra rather than the finer structure posterior to the bodies.

A second matter Dr. Fort touched upon, that is the results which come to our attention months after the injury. The patient will give you the history and state he got along very nicely after mobilization for a period, but several months later he develops a complaint which generally does suggest "compensationitis." However, all of these cases are not entirely fakir in their origin. There are some of them which are termed radiculitis. Dr. Nielsen, of Battle Creek, reported some thirty cases recently in which he made this diagnosis, and in his paper he states in many ways he may be censured because of the fact that he is speaking about the very subject which the chiropractors harp upon so much. However, he states in some of these cases operative procedure showed there was impingement of the bone upon the nerve root with resultant distress. Two of these cases I saw recently were diagnosed as radiculitis by the neurologist in whose hands they fell after they had been with the roentgenologist and internists for some time. I think that is a matter we ought to bear in mind; for that reason proper mobilization is certainly indicated over a considerably longer period of time than we have been in the habit of thinking necessary. I have noticed in some of these films we have made some time after injury that the

change in the porosity of the bone during the process of healing is quite marked, and if you X-ray this patient, using the same technic you use immediately after the injury you wonder why the films seems to be over exposed, but it is apparently due to that increase in porosity, and you will find it is quite well defined in the area immediately adjoining the injury.

The matter of lateral films can not be stressed sufficiently and I believe we ought to make several lateral films in all of these cases.

*Dr. Cunningham (closing):*

Stressing the lateral film is very necessary, because, as Dr. Dickinson brought out, you very frequently hate to move these patients, but unless there is almost 100 per cent contra indication they should be moved to enable you to get your lateral film.

I did not refer to the unusual fractures because as a whole they don't give you so much trouble as fractures of the body. It is likely there might be slight compression of the body which would be overlooked, yet in some of the films I have seen you can pick up very minute changes. Those changes, if untreated, will later on show marked compression of the body and probably pressure symptoms, and I want to stress the point they should be examined early. Any suspected back injury should be examined early and again later if necessary. If there is a definite diagnosis of injury that spine ought to be mobilized. So many think these bones repair themselves quickly; I don't think so. There is a considerable period in which the bodies of the vertebræ are softened and a considerably longer period in which they recalcify and regain their tone.

## LUNG CANCER WITH A REPORT OF THREE CASES\*

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Quincy.

Primary carcinoma of the lungs is considered relatively rare; sarcoma even less frequent. Judging from recent literature and three cases that have come under my observation during the past three years in general practice, lung malignancy is a more frequent occurrence than is generally believed.

Berblinger reports the increase in different localities at different periods. In Basel, in the period of 1900-1911, 2.1 per cent of all car-

cinomata were of the pulmonary type and in 1924, 4.9 per cent. In Leipzig in 1920 the pulmonary type reached 6.5 per cent. From 1917 to 1921, 3,659 autopsies at the Cook County Hospital revealed 21 cases of primary carcinoma of the lung, a percentage of 0.57 of all necropsies. Statistics by various authors indicate an incidence of 0.15 per cent or more of all autopsies, about 1 per cent of all are carcinoma and 2 per cent of all deaths from pulmonary disease. Lord states that in the combined statistics of Reinhard, Fuchs, Wolf, Passler and Froelich, primary cancer was found but 105 times in 46,169 autopsies. McMahon and Carman have found the total authentic cases of primary carcinoma reported up to this time, to be 428. They report 7 cases collected in the Mayo Clinic.

ETIOLOGY: The white race is more predisposed than the colored race. More than one-half of the autopsies performed were on negroes who are very susceptible to tuberculosis, and yet, only 2 of the 24 cases of primary cancer of the lung were found in negroes. The majority of writers agree that a chronic irritation is the most important cause of primary cancer of the lung. Chronic irritation may be due to trauma and infection. The number of instances of chronic pulmonary infections that develop pulmonary carcinoma do not sustain this theory. However, the existence of lung cancer in miners of ores containing arsenic and cobalt support the theory that chronic irritation due to mechanical or chemical means is an important etiological factor. It has also been claimed that the inhalation of irritating gases from automobiles and industrial processes and dust containing particles of tar from tarring the roads and streets is responsible for increased incidence of lung cancer, the whole of which in my mind is doubtful. I am inclined to believe the old theory of embryonic rests, *i. e.*, that these rests may be equally irritated by chemical, mechanical, bacteria or their toxins or any exogenous or endogenous substance, whereby a malignancy is developed. It is just as reasonable to attribute the same cause of a malignancy in the lung as any other tissue.

SYMPTOMATOLOGY AND DIAGNOSIS: There are no definite physical signs or symptoms that stand out as pathognomonic, as the symptoms vary with each individual case according to the type, location and areas involved. A pulmonary cancer should always be thought of when a patient is of the cancer age, begins to cough and

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

has dyspnea, gradual loss of weight, pain in the chest, with or without pleural effusion; when such a patient shows no symptoms of cardiac, arterial, renal disease or tuberculosis. However, a tubercular condition and a cancer may exist at the same time. The majority of authors list tuberculosis as an etiological factor. Autopsies on equal numbers of tubercular and nontubercular patients do not bear out this statement. The examination of the sputum and pleural exudates may show tumor cells and elastic fibers that can be identified. More often the findings are negative. Bronfin in reporting three cases was able to make a diagnosis in two cases by the characteristically granular cell believed to be pathognomonic of a malignancy as practiced by Mandlebaum and described by Blumgarten. Many of these cases are mistaken for pulmonary tuberculosis, lung abscess, bronchiectases and aortic aneurysm. The only evidence in favor of a malignancy in some of these cases is the serosanguinous fluid, blood streaked sputum, rapid cachexia and negative laboratory findings. Taking the subjective and objective symptoms together with roentgen ray bronchoscopic examinations and exploratory thoracotomy, are measures advocated in attempt to make an early diagnosis. McMahon and Carman believe that the X-ray will early point to a pulmonary lesion and its probable nature. Thomas and Farmer affirm that by X-ray the nature of the new growth may be diagnosed before clinical signs. Staehelin states that the detection of tumorous elements in the sputum definitely determine the disease. Bard concludes that the pleural exudate of a cancerous origin possesses a hemolytic action on the patient's red cells, a phenomenon missing in the exudates of infectious origin. Others believe that an exudate rich in albumen may be considered pathognomonic of cancer.

CASE I. Carcinoma of the left lung. C. H. C. Male, age 53; date of examination, September 22, 1925. Past history: Typhoid at 30, influenza, 1918; attacks of malaria at various times of life; operation stone in kidney, 1913; operation hemorrhoids, 1893; chronic cough which subsided with abstinence from tobacco; has taken alcoholics in moderate amounts; bowels always constipated. For two or three months complained of pain in left back and for ten days slight cough with blood streaked expectoration, loss of weight and strength and some dyspnea, more marked in the past two weeks. Physical

examination showed a very thin man; weight, 140; height, 5 feet 10 inches; temperature, 98; pulse, 104. Pupils equal and reacted normally, no teeth, submerged tonsils which showed evidence of chronic infection. Thyroid was not enlarged. Heart somewhat enlarged, soft systolic murmur at the apex, not transmitted, poor heart sounds, superficial arteries, tortuous and hard; blood pressure, 155/105. Lungs normal on right, breath sounds and percussion note somewhat impaired at the left apex. Flatness from the 5th interspace to the base anterior and from the midscapula region to the base posteriorly. Over this the breath sounds were present and at the upper level of this area oegophony was present. X-ray of the chest that day showed a pleural effusion on the left side and extending above the level of the fluid was a shadow suggesting a new growth. After aspirating 1300 c.c. of a markedly bloody fluid, X-ray showed a mass in the left hilum region composed of three distinct nodules and with this, the history of bloody fluid from the pleural cavity it seemed rather certain that the process was a new growth. Rapid metastases accompanied by increased cachexia, involvement of the spleen, liver and mesenteric glands. Death occurring January, 1926, a duration of about 6 months.

CASE II. Carcinoma right lung. Mrs. J. H. T., age 53. Past history: malaria for 30 days in 1913; influenza, 1918; very severe and of two weeks' duration; severe attacks of cold since that time. Left breast amputated, 1916; appendectomy, 1920; treated for cholecystitis one year ago. Complained of shortness of breath, indigestion, coughing after taking food and occasional vomiting provoked by cough, tight feeling around left lung, choking sensation, dull pain throughout right lung, asthmatic tendency, breathing better at night than day. Physical examination revealed a woman with a pale, pasty skin, weight 145 pounds (had weighed 172), pulse 96, blood pressure 190/100, slightly jaundiced, cachexic, anxious and melancholic appearance, few moist rales in apex left lung, diminished vesicular resonance over entire right lung, increased size in right side of thorax, flatness over entire right side. X-ray at this time showed the entire right lung to be cloudy. After aspirating 2000 c.c. of a serosanguinous fluid there was still a dense area from the 5th interspace down. The picture at this time revealed



evidence of a new growth of a progressive metastatic nature. This patient continued to go from bad to worse until the time of her death 4 months later. The chest was aspirated twice subsequently, getting less fluid each time. I believe that too long a period had lapsed from the time of breast removal to consider it metastatic.

CASE III. Lympho sarcoma. M. C. M. Male; age 71. Past history: Weight two years ago 190 pounds. Good habits, very energetic life as an educator, lecturer and capitalist. Family history negative. Always healthy and robust. Operation for appendicitis at age 45; no other illness of any consequence. At age 69, when first examined, did not appear a day over 50, but his heart had begun to definitely enlarge to the left, no murmur but a reduplication of the first sound. Blood pressure, 210/130; pulse, 92. Urine: albumen 3 plus low in solids and both hyalin and granular casts, an obvious sclerotic brights. X-ray of chest, July, 1926, showed a band of fibrosis running through the middle of both lungs with a good deal of fibrous change in both lungs. In December, 1926, he developed a cardio vascular *syndrome*, the brunt of this *syndrome* being borne by the heart muscle, the heart being markedly enlarged in all dimensions, more especially the left ventricle. At this time he suffered from spells of dyspnea which were threats of cardiac failure. After a long rest in bed, proper diet and elimination, I noticed that he was gradually losing weight and becoming somewhat cachexic. His chest was reX-rayed with the following interpretation: heart shadow markedly enlarged, old fibrous pleurisy in right base, opaque shadow in mediastinal space behind the pericardium having the appearance of a calcareous deposit. X-ray October, 1927, showed a definite pleural exudate displacing the heart to the right nipple line which was formally displaced to the left axilla. X-rays made from time to time show increased density of the left lung with evidence of a metastases from the mediastinal gland with a solid mass formation of the lower lobe of the left lung. His weight 12 months ago was 190, now 131 pounds, his hemoglobin has dropped from 90 to 50, had no fever, cough or night sweats. No pain in the chest, only dyspnea and a tight feeling.

Two of these cases being carcinoma and the other lympho sarcoma with their variable symptoms, prove the wide range of symptoms in chest malignancies, yet there were some symptoms

identical in all three cases. CASE No. I of the left lung and lived 6 months from time of diagnosis. CASE No. II of the right lung had been sick for 2 months when diagnosis was made and lived 4 months longer. CASE No. III, sarcoma, and now living 12 months after diagnosis but surely progressing to a fatal termination. Two of these patients complained of pain and dyspnea and had cough, all had pleuritic exudates, none had night sweats or temperature except the two that succumbed and then only in the extremis.

CONCLUSIONS: Dyspnea, gradual loss of weight, progressive anemia with or without cough or pleuritic exudate, with dense shadow in the lung with absence of tuberculosis is sufficient evidence to cause us to seriously consider a lung malignancy. The X-ray, exploratory thoracotomy and thoracentesis are valuable procedures in determining the location and type of neoplasm. Thoracotomy will no doubt in the future become more popular as a diagnostic means as well as enabling the removal of the growth in accessible localities with the possibility of saving a few of these patients by its surgical removal.

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#### DISCUSSION.

Dr. H. Gates, Bradenton:

I enjoyed the paper very much; it enlightened me; I have been practicing medicine for thirty-six years, and I have probably had some of these conditions and did not know it. I am like the old countryman running a store; a fellow came in and wanted some onions; the old fellow says, "I'm sorry I haven't got any now, but I'm expecting some in a few days." After the fellow had left, the storekeeper scratched his head and directly another party was in there, and he said, "I believe that damn fool wanted inguns; I had plenty of them." That is probably my trouble. I have had plenty of these cases but didn't recognize them. I had some cases of flu with pleurisy. I didn't know whether it was in order or not, but I had treated them for the flu and

didn't get any results, so I just took 10 c.c. syringe full of serum from the pleural cavity and injected it back into patient hypodermically. It was an autogenous vaccine and it cleared up the condition in the lung.

*Dr. Davis, (closing):*

There is nothing further I wish to add to the discussion.

### OSGOOD-SCHLATTER'S DISEASE— WITH CASE REPORT

S. WARD FLEMING, M.D.,  
West Palm Beach.

Partial separation of the tubercle of the tibia is a condition occurring occasionally in stout, athletic boys of ten to fifteen years. The explanation of this lesion probably lies in the developmental formation of the tibia which will be discussed later. The upper epiphysis of the tibia has an anterior tongue-shaped projection which is frequently exposed to extreme muscular force or direct trauma during a period of life antedating bony union. Therefore as Scudder<sup>1</sup> remarks, injury which in youth produces a partial separation of the tubercle, in adult life produces a partial avulsion or fracture. Complete avulsion of the tubercle is rare, probably because it receives only the central part of the insertion of the ligamentum patellae, its lateral margins being attached on each side of the upper part of the shaft of the tibia. In the case which I am describing below both a partial separation and a partial avulsion of the tubercle are seen to be present. To Osgood<sup>2</sup> belongs the credit for the first description in 1903 of the etiology and pathology of the condition which bears his name. Schlatter's<sup>3</sup> report did not follow until 1908.

The explanation of this type of bone lesion as well as similar conditions occurring elsewhere in the body can be found in a brief review of the anatomical development of the part under consideration. There are commonly only three centers of ossification in the tibia; one for the shaft appearing in the seventh or eighth fetal week; one for the upper epiphysis appearing usually in the last month of fetal life and uniting with the corpus in the 19th-24th year; and one for the lower epiphysis appearing in the second year and uniting with the corpus in the 16th-19th year.<sup>4</sup> Several observers have noted that there is occasionally an additional nucleus developed for the

tuberosity at the 11th-13th year which quickly fuses with the main body of the epiphysis. Scudder<sup>1</sup> states that this tongue-shaped tubercle probably has its own bony nucleus appearing at 11 years and merging with the upper tibial epiphysis at 15 years. Gray<sup>5</sup> mentions two additional centers which occasionally exist in the tibia, one for the tubercle as noted above and one for the medial malleolus.

The symptoms and local signs of Osgood-Schlatter's disease vary considerably.<sup>6</sup> In the cases which are bilateral and usually less severe the onset may be insidious with aching after exercise, localized tenderness, loss of speed in running, and little demonstrable X-ray signs. In the cases which are unilateral the onset may be more abrupt with a preceding history of unusual exertion or trauma. Frequently the pain on movement, swelling, and marked tenderness date from a football game. The team's favorite drop-kicker or punter may be disabled for the part of the game in which he is most proficient. In these acute cases there may be an associated bursitis, less often a synovitis, since the joint capsule does not extend to the tubercle as a rule.<sup>7</sup> Roentgenograms may show a definite separation of the tubercle or even a partial avulsion. The diagnosis may be confused with traumatic periostitis, osteomyelitis, localized tuberculosis, or possibly beginning new growth.<sup>1</sup>

The treatment consists primarily in immobilization of the knee joint by the use of a posterior splint which removes the strain incident to the continued use of the quadriceps muscle and allows the tubercle to become firmly attached. Flexion should be prevented for three to six weeks, violent exercise for four to six months or longer. Bone pegging has occasionally been performed for marked separation of the epiphysis. Cotton<sup>8</sup> recommends removal of avulsed fragments through an incision splitting the ligamentum patellae. Osgood himself, in a personal communication, recommended a similar procedure if the symptoms were acute.

#### CASE REPORT.

A colored boy, aged 16, of stout muscular development, first noticed pain and tenderness in region of the left tibial tubercle about two years ago. There was no definite preceding trauma. Disability has been especially noted after running, climbing stairs, or playing foot-

ball. The family history is irrelevant. Laboratory and serological data are negative.

Physical examination reveals no significant findings elsewhere. The region of the left tibial tubercle is distinctly enlarged and very tender to pressure, especially when the leg is flexed; then the deformity becomes quite apparent. On fluoroscopic examination there is noted a distinct difference in the outline of the two tubercles with a slight separation on the left, and a movable bony shadow just anterior and above. The details of this condition are brought out well in the films.\* The movable bony shadow is seen to be formed by three rounded masses from 0.5 to 1.0 cm. in diameter. The fourth is very small and lies nearest the cup-shaped area of detachment. There is a slight separation of the tubercle which does not reproduce well in the photograph.

Since operative removal of the fragments was not favored by the patient, a posterior splint was applied for three weeks with immediate relief of the acute symptoms. Violent exercise must necessarily be restricted for a longer period than if operation had been performed.

It is interesting to note other epiphyseal

lesions which are thought analagous to Osgood-Schlatter's disease. Kohler's disease of the tarsal scaphoid is a condition most commonly encountered in boys from three to ten years, whose chief complaint may be slight tenderness over the dorsum of the feet. The roentgen ray reveals a thinning and increased density of the bony nucleus.

Infracture of the head of the second metatarsal was first described by Freiburg<sup>9</sup> in 1914. The localized pain, tenderness, and slight swelling usually produce considerable disability. Girls are more frequently affected than boys. As Lewin<sup>10</sup> states, the roentgenogram is necessary for accurate diagnosis. The typical case shows flattening of the metatarsal head, broadening of the neck and distal portion of the shaft, widening of the joint space, diminished cupping of the proximal phalanx, and an occasional line of incomplete fracture. Loose bodies are occasionally found.

The condition first described by Legg,<sup>11</sup> later by Calve and Perthes,<sup>12</sup> is one of the most definite epiphyseal lesions of this type. It is characterized clinically by symptoms suggestive of tuberculous coxitis, occurring in boys more commonly than girls. Roentgen ray shows fragmentation and areas of increased density in the

\*By courtesy Dr. F. K. Herpel, Good Samaritan Hospital, West Palm Beach, Florida.





femoral head, later marked coxa vara, with flattening of the head and broadening of the neck.

Scheuermann<sup>13</sup> and Buchman<sup>14</sup> have recently presented evidence to explain certain cases of juvenile kyphosis by changes in the vertebral epiphyses. The disease occurs more commonly between the ages of ten to twenty years with the complaint of tenderness, backache, and slight deformity. Roentgenograms show fragmentation of the epiphyses when they can be seen and haziness of the joint spaces.

Processes analogous to Osgood-Schlatter's disease and the above have also been described in the os calcis, the olecranon, the ilium, and the semilunar bone. Probably other locations will be noted in time.

Although there is general agreement that this group of epiphyseal lesions are of the same type, the etiology and specific pathology are a matter of discussion. Christie<sup>15</sup> states that "a majority of investigators incline to the idea that the disease is due to long-continued or occasionally acute trauma, with resulting interference of circulation and subsequent necrosis involving both the bone and cartilage of the epiphysis." Lewin<sup>16</sup> believes the etiology to be trauma affecting the bone and cartilage during a period of unusual growth. Williams<sup>16</sup> objects to descriptive terms such as epiphysitis which suggest inflammation where he considers none exists. All agree that the condition is not luetic, rachitic, or tuberculous. Those who deny the infectious theory and accept that of trauma, differ in their opinion of the pathology. Some observers see inflammation, others a healing fracture, and others an aseptic necrosis.

Regardless of these differences, the general rule of treatment with modification according to location, consists in rest and freedom from trauma.

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#### SOME OBSERVATIONS ON THE WASSERMANN TEST\*

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Miami.

Not many years have elapsed since through the epoch-making researches of Wassermann and his coworkers the medical world has been provided with one of its most powerful aids in the diagnosis and treatment of probably the worst of our disease enemies and one of most protean manifestations. There is much truth in the aphorism of Dr. Osler, "Know syphilis in all its manifestations and relations and all other things clinical will be added unto you." Syphilis, like the poor, we have always with us, but unlike the poor we often do not recognize it. We may come into this world with the heritage of syphilis and we may pass it on to generations yet unborn. No age, no sex, no clime, no class is exempt. Once having had the disease there is none that ever dare give assurance of full freedom from it.

With these facts before us there is no wonder that the subject of syphilis, though hackneyed it may seem, is ever a vital, appealing subject.

The great mass of literature that has accumulated in the discussion of the causative organism, the treponema pallida; and in discussion of treatment, especially salvarsan and allied remedies; and in discussion of laboratory findings; this immense amount of literature makes it difficult for the younger graduates in medicine to realize how very recent are the great advances in the study of the disease as compared with the age of the disease itself. The year in which I entered medical school, 1905, Schaudinn demonstrated the treponema pallida. Before I had finished my four-year course Wassermann had given to the

\*Read before the regular meeting of the Dade County Medical Society, December 2, 1927.

world his intricate but invaluable serum diagnosis. My internship was scarcely ended when Ehrlich announced his discovery of salvarsan. This rapid succession of events in syphilology—etiological, diagnostic, curative—have formed the substructure of an enormous amount of work along all three lines.

*Etiologically.*—The *treponema pallida* has been studied in many ways and from many varieties of lesions. Today its presence as demonstrated in dark field preparations forms a most important diagnostic step, for by it we are enabled to make a very early diagnosis and thereby institute most effective treatment. Probably no greater amount of work has been done than from the *diagnostic* standpoint—to this we refer later. Since the introduction of salvarsan as a *curative* measure many allied preparations have been introduced and their value tested, such as the various arsenical preparations and other metallic remedies.

It is to the *diagnostic* side of the question and particularly to the Wassermann test that our attention is especially called tonight. The Wassermann test is an exceedingly tedious, complicated procedure and requires the closest concentration for its proper performance. It is amusing to have a patient come into the laboratory and ask if he may wait outside for a few minutes for the result of the test, or to be accused of being exorbitant in the charge of \$5.00 for making a blood Wassermann. I shall not soon forget how in my fourth year in medicine (the Wassermann test was then in its infancy) a fellow student was doing some special work along this line and undertook to enlighten me in the principles of the reaction. I gained a remarkable respect for this student for his intelligence in understanding and for his ability in making me understand so complicated a reaction. In later years when I fully realized the finesse of technique required, to say nothing of the clear reasoning, and the conviction that lay behind it, I have had a most profound respect for Professor Wassermann. It is only the remarkable value of the test and the recognition of this that can account for the painstaking investigations along various phases of the subject. The many modifications of technique, the many different antigen preparations in use, are all representative of laborious effort in attempts to perfect this valuable aid to diagnosis and treatment. Because of the time and labor consumed in carrying out the Wassermann technique and the many

modifications thereof a number of other shorter methods have been devised, the Kahn precipitation test probably being of these the most popular. We are slow however to give up the Wassermann test which has proven its value many times over, a fact which is attested to by the very rapid rise of Wassermann laboratories all over the country and to the prominent place which the study of this technique has in all schools for the training of technicians.

We are truly appreciative of all those who have worked so laboriously to give us an efficient laboratory guide and we feel that we cannot do without it. At the same time we are aware of the perplexing situations in which we are often placed because of some of the results obtained. Different laboratories sometimes give conflicting reports; sometimes the same laboratory will obtain different results on the same patient; varying reactions will be obtained from different antigens. Various explanations have been given for all of these and we shall not take time here to discuss them. It is the weakly positive reaction upon which we want to put a little emphasis tonight.

From the standpoint of the laboratorian the weakly positive reaction is one of the most difficult situations with which we have to deal. Some feel that the stigma of a positive Wassermann can't ever be erased though all evidence of the disease be cleared away. There are few of us who have not seen the hopeless agony of a sensitive patient when told of a positive result. Or, some may have had such an experience as this: A young man came into our office for the result on his Wassermann test. When told that it was negative he fell as if in a faint, his arms outstretched, his whole weight falling upon me in such fashion that aid had to be summoned in order to maintain equilibrium. It was many minutes before he could regain an intelligible sequence of conversation. I was lost in amazement at the effects produced by the news of a negative result. After a season I learned that these were expressions of joy. He had had a positive report from another laboratory. I am sure that none of us realize the heartaches that come from many of our reports, probably far worse than the disease. Because of this thought it was at one time our practice to disregard any reaction less than two plus and to place little value on a two plus reaction. We soon learned that this would not do, for on occasions we would be met with the remark, "It is very surprising to



obtain a negative result in this case, the patient shows decided evidence of syphilitic involvement." We have, when possible, explained circumstances to the physician in charge and asked his preference as to manner of reporting. Sometimes we simply report "slight reaction" without using the term "positive."

Since September, 1926, we have had in use three antigens and this has in a large measure solved much of our difficulty. When two of our antigens give positive results we have a much clearer conscience in reporting them. Especially here do we refer to the weakly positive reactions. In our experience these cannot be too lightly regarded—of so much value to the patient is the diagnosis especially in early infection. Some have expressed the opinion that weakly positive reactions are of value only in treated cases. With this we cannot agree. One case to the contrary may be named: initial lesion had existed one week at time blood was taken. The result: acetone insoluble antigen, negative. Cholesterinized antigen, two-plus. Kolmer quantitative, one-plus—one-plus—one-plus—negative—negative. Another case of obscure diagnosis: acetone insoluble antigen, negative. Cholesterinized antigen, one-plus. (Kolmer antigen not then in use). Therapeutics was instituted and the patient experienced early relief.

Below is tabulated some comparative results in the three antigens. The acetone insoluble and the cholesterinized antigens are obtained from the New York State Department of Health. The Kolmer antigen is obtained directly from Dr. Kolmer. You will not be bored by a citation of these results but a few remarks may not be amiss. Sixty-one per cent of the positive reactions were positive in the three antigens used. 85% were positive in two of the antigens. A little more than two per cent of the whole number of examinations made were positive in the cholesterinized antigen only. A little less than two per cent of the whole number were positive in the Kolmer antigen only. Where positive results are obtained in more than one antigen even though weakly positive, we feel that results cannot be disregarded. Even when obtained in one antigen only the patient should be instructed to have the test repeated at a later date. Our experience with the provocative Wassermann test has not been sufficient to express an opinion. This may offer a means of help in such cases though opinions differ as to its value.

Efforts are being made at standardization of

the test both as to technique and as to interpretation of results, but while this is being done none of us is willing to suffer the loss of the aid given us, so we shall continue to bear with its shortcomings and to profit by its advantages.

#### LABORATORY DATA.

The three antigens have been in use in our laboratory since September, 1926.

Total number of examinations considered.....	961
Total number of negatives .....	691
Total number of positives.....	269
=28% of total number of examinations.	
Positives in three antigens: 163 or 61% of all positives.	
(The acetone insoluble antigen never alone gave a positive reaction.)	
Positives in two (or more) antigens: 227 or 85% of all positives.	
Positives in cholesterinized antigen only: 22.	
Slightly more than 8% of all positives.	
Slightly more than 2% of all examinations.	
Positives in Kolmer only: 19.	
Slightly more than 7% of all positives.	
Slightly less than 2% of all examinations.	

The following comparison of degree shows no marked difference between the two more sensitive antigens:

Cholesterinized, 1-plus: and Kolmer, 4-plus.....	6
" 2 " " " 4 " .....	6
" 3 " " " 4 " .....	7
" 4 " " " 4 " .....	9
" 4 " " " 3 " .....	4
" 4 " " " 2 " .....	3
" 4 " " " 1 " .....	6

#### DISCUSSION.

*Dr. M. D. Thomas, Miami:*

The discovery of the Wassermann reaction, I think, has done people more good than any other ever made. The Wassermann reaction is the test we want to have run or made on every patient who has an obscure sickness. They all will not give a 4-plus but they will give a one, two or three-plus. That means different stages of infection. A one-plus reaction will be discovered in an early, initial lesion, or a hereditary lesion in persons fifteen years or over. The two or one-plus may be discovered where the patient has been drinking and would have an active four-plus if the Wassermann had been run ten days before the spree. On the other hand, two or three days after the spree, the patient will give a negative result.

The Wassermann will sometimes resist all forms of treatment. I have in mind a patient whom I had given twenty-four doses of neo-salvarsan, and she still had a four-plus Wassermann. She resisted all forms of treatment. She started back north in a Ford car with her husband. They broke down somewhere in Georgia, and she developed a malaria. In the fall she



came back, with a negative Wassermann. A malarial infection will often do that with a Wassermann reaction.

Often the only manifestation you will have of a positive Wassermann, one-plus, is a small gland, or a little discoloration of the skin—the skin will look spotted or dappled like the loins of a fat hog. You will often get a weakly positive Wassermann in patients who have very early infection.

In babies, born of actively specific parents, the reaction should be a four-plus, but will often be a one-plus.

I think the laboratories will do the men a great favor in reporting every one of those one-plus cases. As a rule the severity of the lesion will coincide with the Wassermann reaction.

*Dr. W. H. Watters, Miami:*

My experience has been very greatly at variance with that of Dr. Thomas. I have had, in the last fifteen years, the opportunity of observing some twenty-five or thirty thousand cases, and I am not able to say that the severity of the infection can be gauged by whether the Wassermann reaction is one, two, three or four-plus. I have frequently seen a comparatively mild case, or cases entirely overlooked, who showed a four-plus reaction. On the other hand, I have observed cases of a very severe infection on whom the Wassermann reaction was but one or two-plus.

I was very much interested in Dr. Youmans' paper, and I think the subject was given very admirably. The thing we need is the cooperation between the laboratory and the clinician. The laboratory alone should not make a diagnosis of syphilis, and the clinician alone should not make a diagnosis of syphilis, but it is the co-ordination of the two.

I have seen a distinctly positive four-plus reaction in cases I knew were not syphilitic, due to febrile conditions, or hepatic conditions.

I hope someone will contradict me, or otherwise, but I have not been able to gauge the severity of the disease by the Wassermann reaction. A one or two-plus Wassermann may mean nothing in itself.

*Dr. B. Litterer, Miami:*

I feel the Kolmer modification of the Wassermann is supreme in all tests, by far, and the best in addition to this has probably been the Kahn precipitation test which has helped a great deal in conjunction with the Kolmer. Kolmer advo-

cates the use of this test—not to take the place of the Kolmer test, but as a wonderful adjunct, and there are often cases which probably will not show up positive in the Kolmer, which can be detected in some manner by the Kahn precipitation test, and the amount of errors and pitfalls to which one is liable from a standpoint of technical error is practically eliminated in the Kahn precipitation test.

Hecht Gradwohl advocates a test which, in my mind, has a great deal of advantage. Even in spite of a negative Kolmer and Kahn precipitation test, a Hecht Gradwohl test is run in which they use an unactivated serum. This test, however, is rather too sensitive to be used in ordinary routine work. It is the negative phase of these tests which is of advantage. I feel in those obscure cases it is well to check them over with the Hecht Gradwohl.

As to cases of primary syphilis, that come with a chancre as a rule, the Wassermann is usually negative, and in this stage, the dark field is positive. It is the case in which the best results can be obtained by medication. In the past two or three years we found approximately forty cases in which the dark field has been positive, and with the administration of neosalvarsan, with treatment over a period of eight to ten months, in every instance the Wassermann and the Kahn has been negative at least two years after the first lesion was noticed. In those cases, there were probably two or three in the series which did not receive adequate treatment by falling into incompetent hands, and showed recurrence of a positive blood reaction.

I think in all cases in which there is a suspicious lesion, the dark field examination should be made, and active treatment over at least ten months' time should be instituted.

*Dr. J. I. Thorne, Miami:*

Two years ago last summer, I finished the urology course at the Graduate School of Medicine of the University of Pennsylvania, and of course was in close contact with such noted research workers as Kolmer, Schamberg, Thomas, Klauder and others. It is their opinion that any weakly positive reaction by the Kolmer improved test, barring technical errors, is an indication of syphilis, which merits careful consideration. The Kahn test is generally considered an excellent check.

Dr. Klauder demonstrated several cases in which serum obtained from primary ulcers gave a positive Wassermann reaction long before the

blood Wassermann became positive. The technical procedure is to wash a venereal ulcer gently with normal salt solution and if local applications have been made, the ulcer should be allowed to continue under normal salt compresses for some two or three days while dark field observations are being made. If the dark field does not reveal the diagnosis, then the ulcer may be moistened with denatured alcohol and allowed to stand a minute or two. The alcohol and serum are wiped off gently and as new serum oozes from the alcohol irritation, it is drawn up into a medicine dropper or the dropper can be used as a suction to draw the serum from the tissue. The serum is diluted with ten or fifteen drops of normal salt and sent to the laboratory. Dr. Klauder is now doing research work on desiccated serum from primary ulcers.

Since weakly positive Wassermann reactions may indicate poorly treated or not fully developed or latent cases, the history and further investigations along these lines are usually fruitful. Falsely positive reactions have been demonstrated in cases of diabetes melitus, jaundice and uremia. Such diseases that regularly give a positive reaction (yaws, leprosy, pulmonary tuberculosis, malaria, scarlet fever, etc.) fail under clinical observation. Late pregnancy has also given falsely positive reaction with cholestrol antigens. The latent syphilitic cases may be more clearly revealed with spinal fluid investigation. The Wassermann-fast cases may be cleared up with colloidal metals. Clearing your cases by the methods indicated reveal the true diagnosis and indicate future action.

Finally, no cases are to be considered cured until they have been able to deliver negative reactions for two years steadily, after the last treatment was given. No weakly positive case should be considered free from syphilis.

## INTERNAL INJURIES

J. C. RICHARDSON, M.D.,  
West Palm Beach.

Internal injuries as a subject is entirely too large to incorporate in a paper. Volumes might be written and still there would be points not covered, but inasmuch as most internal injuries are evidenced by outward signs, such as gunshot wounds, stabs and the like, it is the occasional case of injury without any external evidence, or only slight signs that give us the most concern in diagnosis and the institution of treatment. It

is to this type that I shall try to confine myself.

Intra-abdominal injuries, without external evidence, are usually caused by direct force. The injury incurred to the abdominal contents is not necessarily in proportion to the intensity of the force applied, as seemingly insignificant blows sometimes result in serious internal injuries. Likewise, severe blows may not cause any appreciable damage. The damage done to the viscera by the application of force is probably due to its being forced against the bony confines of the abdomen. This is brought to mind by the fact that most ruptures of the intestines occur in that portion which extends into, or approaches the pelvis. Injuries, however, can occur at a point removed from the point of application of force, by succussion or contre coup, if you please.

I wish to call your attention to a few cases that have been reported recently, also one from my own practice which will better illustrate some of the things that I wish to bring out.

Dr. Carl B. Davis, of Chicago, reported recently in the Surgical Clinics the following, which I shall make as brief as possible:

The patient, a man of thirty-five, with a history of a severe blow to the abdomen, felt momentary pain. After a short time, he attempted to return to work, but felt faint and sat down. In a quarter of an hour he began to suffer pain in the abdomen for which morphine was given. One hour after the injury, he was admitted to the hospital for observation, at which time, his pulse, respiration and temperature were normal. No pain and very little tenderness on deep pressure. Normal urine, white count, 7000; hemoglobin, 90. When seen two hours later, condition was the same and he stated he had gotten out of bed for voluntary urination. Two hours and a half later, patient had to be aroused to inquire into his condition, which was approximately the same; temperature 99, pulse 90, no increase in the leucocyte count. Seven hours later, patient complained of severe pain, temperature increased to 104, and pulse to 160, white count, 11000. Laparotomy was done and the small intestine was found torn completely across, with a marked fibrinous deposit covering the intestines.

The second patient was crushed between the motor house of a traveling crane and an overhead beam. He was persuaded to enter the hospital, with some difficulty. On admission, his temperature and pulse were normal, urine negative, and white cell count 18000, moderate ten-

derness and no rigidity. Because of the experience of the case just reported, which succumbed, an exploratory laparotomy was done and a rupture of the bowel, one inch long, was found. Patient made an uneventful recovery following operation.

The third, a case of my own, is a farmer who gave history of a fall into a ditch while returning from work in the fields. He received a rather severe laceration of the chin, for which condition I was called. Patient had a right inguinal hernia for which he wore a truss. At the time of the fall, the truss became displaced and his hernia came down. He stated there was some pain at the time, but that upon lying down, hernia had reduced itself and the pain had subsided. His attitude was to direct my attention entirely to the laceration of his chin. Pulse, respiration and temperature were normal. There was tenderness over the right inguinal region, but no rigidity. No amount of persuasion could make him go to the hospital for observation. About four hours later, patient was again seen, with no change in his condition. Seven hours from the first time I saw him, he was brought into the hospital with severe pain in the abdomen, extreme tenderness in the right inguinal region, marked rigidity, temperature 103, pulse 140. Laparotomy was done and rupture of the ileum demonstrated, with the usual fibrinous deposit which accompanies peritonitis.

The problems of diagnosis in the above type of cases usually do not include differentiation of shock and hemorrhage, because of the fact that most of these injuries are seen after some time has elapsed from their occurrence. However, it is well to remember the subnormal temperature, with rapid weak pulse, usual lack of appreciation of pain, and unaltered hemoglobin in shock, as against syncope, extreme thirst, collection of fluid in flanks, yawning, impairment of vision in late cases, and an enormous reduction of hemoglobin in hemorrhage.

The examination should include, besides the ordinary inspection and palpation, examination of a catheterized specimen of urine, digital examination of the rectum, a white, and a differential count and a hemoglobin estimation.

The symptoms of pain, tenderness, muscular rigidity, nausea and vomiting, increase in pulse rate, without the accompanying rise in temperature, are the usual signs looked for, but these may be slow in appearing, and hence, the need of repeated examinations at short intervals. All of

these may not develop in any given case, but by careful watching of the patient, enough underlying distress will be found to indicate the proper procedure. Pain, muscular rigidity, tenderness, regardless of mass, bloody urine, or nausea and vomiting, are enough justification for exploratory laparotomy.

The treatment of such cases is expectant, only so long as the symptoms are slight and the patient rapidly recovering. The active treatment is of course, surgical, and depends entirely upon the part injured.

Without going into too much detail, I wish to call your attention to a real life-saving measure, namely, enterostomy. With internal injuries involving the hollow viscera, there is necessarily soiling of the peritoneum by their contents, and an accompanying peritonitis. These injuries necessitate resection, or simple repair, and as ileus is practically sure to interfere with the recovery of the patient, not only by accumulation of toxic material but by increasing tension on the suture lines of the newly made repair, it seems that the proper procedure is to guard against such a defeat at the time of repair. Simple enterostomy does not interfere with drainage, and I feel sure that less trouble would be encountered if this were made a routine procedure in all cases where there has been soiling of the peritoneum from intestinal contents.

The site of enterostomy depends largely upon that portion of the intestine involved. In the lower abdomen, there sometimes arises a condition known as duplex ileus with two points of obstruction, one in the sigmoid, and another in the terminal ileum. Often an enterocolostomy, with caecostomy, is advantageous in caring for this combined condition. In most cases an enterostomy in the lower ileum is sufficient, as the lower obstruction can most often be combatted by the usual methods, as the rectal tube, high enematas and pituitrin. Opening the jejunum rapidly dehydrates your patient, and there is a great loss of chlorides, which makes this site not one of choice, even if at a later date, it also has to be drained.

In injuries to the kidneys, the symptoms are, in a measure, proportionate to the amount of damage done. Intra-peritoneal rupture will rapidly show evidence of hemorrhage and would probably only be found during an exploratory laparotomy. Extra-peritoneal rupture, including the capsule, would show, besides blood in the urine, a fullness in the loins with dullness on



percussion. The pain, too, is not delayed, and if one bears in mind reflex pain along the course of the ureter, extending into the testicle, the seat of injury is not as vague as in other abdominal injuries.

Both of the above cases demand immediate operative measures. However, the mere presence of blood in the urine, unless profuse or definitely of bladder origin, is not indicative of serious damage and expectant treatment may be carried out. If definitely from the bladder, accompanied by other symptoms of rupture, explore the prevesical space and examine the bladder extra-peritoneally, before opening the abdomen.

In advocating early exploratory operation, I take fully into consideration the fact that on occasions nothing may be found, but the chagrin felt following such an incident is more than offset by the institution of timely treatment in instances of real injury.

In conclusion, I want to emphasize careful, painstaking examinations, repeated at frequent intervals. Immediate exploratory laparotomy in the presence of pain, tenderness, muscular rigidity, or, if in doubt, and in the presence of injury to hollow viscera, availing oneself of the advantages of enterostomy.

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#### PRE- AND POST-NATAL CARE\*

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Both the profession and the laity are beginning to attach much importance to the pre-natal care of the parturient woman, but not enough importance is attached to the post-natal supervision.

That the necessity of pre-natal care is appreciated by women of the civilized countries is manifested by the fact that the tendency within the past ten years is for them to present themselves for care and advice during the early months of pregnancy. Prior to the past decade, the tendency was for the pregnant woman to present herself only during the last few weeks of her pregnant state, and in a great number of instances, the physician was not consulted until the beginning of labor.

As a result of scientific pre-natal care, the maternal mortality throughout the civilized

world has markedly decreased, and there is a great diminution in the death rate from such conditions as the pernicious vomiting of pregnancy, sepsis and eclampsia.

In presenting herself for advice, the woman is actuated only by the thought of keeping herself in as good physical condition as possible throughout her period of gestation, in order that nothing having a deleterious effect upon the child may be done.

The physician having charge of the case should think further than the termination of the pregnancy, and his object should be to not only carry her to a safe termination for herself and child, but in addition, should endeavor to see that she returns to as near as possible her normal condition prior to her pregnancy.

A pregnant woman should be regarded by the physician as bearing an entirely altered physiology from the normal, since in the pregnant condition, metabolism is changed, and extra work is thrown upon the cardio-renal, digestive and nervous systems, as well as the different organs of the entire body.

In addition to the regular routine examination including the examination of the urine, recording the blood pressure, measurement of the pelvis, determination of the presentation and position of the child, if near term, a complete history should be taken. It should be noted the age, occupation, number of miscarriages, length of time married, and the history of any menstrual disorders, together with full information as to previous deliveries, whether normal, or abnormal.

The duration of the present pregnancy should be as accurately determined as possible, by fixing the date and character of the last menstrual flow.

The patient should be closely questioned as to any constitutional disturbances, such as vertigo, headache, disturbances of vision, constipation, appetite, vomiting, nervousness, inability to sleep, etc.

The patient should then be subjected to a very thorough physical examination, and the heart and lungs especially subjected to close consideration. The heart should be examined for any lesions and lack of compensation, and the lungs for any evidence of tuberculosis.

The breasts must be examined to determine if there be a lack of development of the glandular tissue, and also to determine the condition of the nipples for abnormalities such as fissures, retractions, etc.

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It must not be forgotten that strict attention should be paid to the pelvic measurements, and if it is found that abnormalities are present which would interfere with the passage of a normal sized child through the bony canal, the husband should be acquainted with the fact.

One doing obstetrical work to any extent, should have a set of instructions printed, such as the list given in De Lee's text-book.

These instructions are concise and fully cover all points the patient need know. The patient appreciates this courtesy and she does not hesitate to tell her friends about it. As one of the leading obstetricians of New York says, it is the best form of ethical advertising one can get, and it results in many women engaging the one who issues these instructions, who would not otherwise know him.

Any woman presenting herself for examination before the end of the third month, should be examined closely for retroversion of the uterus, since this is one of the principal causes of miscarriage in the early months of pregnancy, on account of the retroverted gravid uterus catching under the promontory of the sacrum, resulting in the expulsion of the foetus.

Toxemia of pregnancy is always a grave condition, and therefore the urine should be frequently examined and the blood pressure determined at short intervals during the entire gestation. It frequently comes on without any prodromal symptoms, subjective in character.

As to the vomiting of pregnancy which is not controlled by the ordinary means, it is well to state that the dehydration of the tissues due to excessive hyperemesis may be combatted by proctoclysis. The ordinary hot Murphy drip of five per cent sodium bicarbonate solution, given not to exceed forty-five drops per minute, not only offsets the lack of body fluids but in many instances relieves the pernicious vomiting.

A pregnant woman having a constant systolic pressure higher than 130 m.m. should be regarded as being in danger of toxemia. In such a patient, the proteids should be cut down, especially during the latter months of pregnancy, regardless of the teaching that the proteid intake has nothing to do with this condition. Diet to be salt free.

The pyelitis, or pyelonephritis, of pregnancy is best treated by urethral catheterization and lavage of the kidneys with some of the germicidal agents commonly employed in the treatment of this condition. The establishment of

free drainage has a tendency to relieve the urinary stasis and resultant infection. It is to be depended upon much more than the urinary antiseptics which are given internally. Pregnancy, even in the latter months, is not a contraindication for cystoscopy and ureteral catheterization.

Encourage the drinking of vast quantities of water, as this not only keeps the urine at a low specific gravity but also lessens the probability of pyelonephritis by free diuresis.

In case of eclampsia and convulsions, the plan of L. G. McNeile of Los Angeles should be instituted. He claims this reduces the mortality to about nine or ten per cent. This is a condensed resumé as follows:

1. Twenty c.c. of ten per cent magnesium sulphate intravenously as soon after the first convulsion as possible; repeated every hour until the convulsions are controlled.

2. Blood pressure to be taken every hour after convulsions are controlled, and if blood pressure begins to rise, nearing its height at time of convulsions, magnesium sulphate repeated, also repeated if convulsions recur.

3. Patients who are comatose or very restless in a semi-comatose delirium and whose blood pressure is falling, should receive chloral hydrate, grs. 20, and sodium bromide, grs. 60, by rectum.

4. Utmost quiet to be observed and nurse to be constantly with patient until latter is out of coma.

5. Oxygen inhalations to be given after each convulsion until breathing is normal.

6. All patients to be prepared for delivery as soon as they are quiet enough to do so.

7. If patient is in labor, use nitrous oxide gas for pain.

8. If in the second stage of labor and proper progress is not being made, low forceps extraction for version, with the consent of attending obstetrician.

9. Termination of pregnancy is indicated only when symptoms persistently recur and do not respond to treatment.

10. Cesarean section is only used for absolutely obstetric conditions.

The majority of us were taught that the toxemia following, or associated with eclampsia, quickly disappeared after the end of pregnancy, and that no permanent damage was done, but this view is not tenable in the light of more recent investigations.

Bunzel reports a series of 133 cases of tox-

emia of pregnancy, occurring at the Sloane Maternity Hospital, of New York, in which a complete follow-up of these cases had been instituted. Persistent hypertension resulted in 37.6 per cent; 39.8 per cent had albuminuria of a certain degree; 54.2 per cent showed renal insufficiency by the phthalein test; and of those who had retinal changes during pregnancy, 31 per cent had persistence of them. These findings collectively gave a percentage of 41.4 per cent with signs of permanent cardio-vascular-renal disturbances following the toxemia of pregnancy.

Relative to the advisability of future pregnancies, it is the consensus of opinion that where there are permanent damages done the cardio-vascular-renal systems, conception should not be permitted to occur again.

The post-natal care of woman has not been given the same consideration that the pre-natal has by the profession, with the result that many women become chronic sufferers from this neglect.

During the months of pregnancy, the abdominal muscles are subjected to a great strain from the constant tension, and at the termination of labor are flacid and atonic. They should be stimulated to contraction by daily massage and graduated exercises, such as extension and flexion of the thighs on the abdomen, and raising the body from the bed, with the limbs fully extended. Muscular movements of the body have the tendency to hasten involution of the uterus.

Unless the abdominal muscles are afforded artificial support by the wearing of an abdominal binder, there is a greater probability of a general visceroptosis and prolapse of the pelvic and abdominal organs.

This support should be worn for at least three months following delivery, in order to allow the flabby and sagging abdominal muscles time to regain their normal tone.

Watson claims that the greater majority of women who consult the gynecologists, do so because of the pain and backache resulting from relaxed abdominal walls and enteroptosis following pregnancy, and says that this may be absolutely prevented in the greater number of cases by the wearing of adequate abdominal supports, subsequent to delivery.

As a rule, very little attention is paid to the position of the uterus following the puerperium, although it is a well-known fact that retroflexion, or retroversion are common complications fol-

lowing this state. After allowing sufficient time to intervene for the uterus to become involuted, an examination should be made to determine the position of the organ. It is relatively an easy thing to correct a displacement at this time, and to hold it in place with tampons or pessaries, until the uterine ligaments are contracted sufficiently to hold it in correct position.

It is stated that a lochial discharge persisting for a longer time than usual, is indicative of uterine displacement and should never be attributed to subinvolution of the uterus, or to retention of membrane.

It is not thought worth while to more than mention repair of the perineum, immediately following delivery, as none could be so negligent as to overlook so obvious condition.

It is held that lacerations of the cervix are due to: (1) delivery of the child by forceps, or version before complete dilatation; and (?) the very precipitate, tumultuous labor, lasting perhaps two or three hours, in the primipara.

In passing, it may be well to state that there is a reprehensible custom current amongst certain physicians of giving pituitrin before complete dilatation takes place. This is responsible for extensive lacerations of the cervix, and any physician guilty of giving it in order to avoid waiting for normal dilatation to take place, should never be called upon to attend a woman in delivery. Such custom shows an utter disregard for the welfare of the woman, and is responsible for semi-invalidism in many women.

Cervical lacerations, unrepaired, generally cause leucorrhea, more or less profuse in character, associated with lower abdominal pain and backache. Such chronic inflammation attendant upon these old unrepaired lacerations has a tendency to become malignant later on in life.

In closing, it is emphasized that as much attention should be given women relative to the post-natal condition as is given them in the pre-natal state, for by so doing, we are able to save many of them life-long suffering.

#### INSTRUCTIONS FOR PROSPECTIVE MOTHERS.

1. Dress warmly. Avoid circular constriction of any part of the body. As soon as child's motion is felt, abandon corsets; wear a maternity waist and a breast support.

2. Take plenty of mild exercise in the open air and sunlight, especially walking, stopping short of fatigue. Avoid violent exercise such as golf, tennis, swimming, and long trolley or automobile



rides, etc. Traveling is permitted only when absolutely necessary.

3. Take no extremely hot or cold baths. Tepid baths are best. In last four weeks before delivery, no tub baths; use shower or sponge baths. Take no douches unless ordered and especially in the last month, allow nothing to touch the internal genitalia.

4. Intercourse should be avoided, if possible. Always restricted and absolutely forbidden the first three months, and the last six weeks, and the week of each month when the menstrual period would normally have occurred.

5. There must be at least one bowel movement every day.

6. Unless otherwise directed, eat usual amount of food. Restrict the meats, or their equivalents, poultry, fish and eggs to four ounces a day, and these only four days a week. Eat plenty of fruit, green vegetables, especially spinach. Drink freely of water and milk, taking at least one pint of milk, or buttermilk daily. Make your fluid intake at least eight glasses per day. (This intake of milk is important because milk contains more available calcium, or lime salts, than any other food, and the growing child, or foetus, needs a large supply of lime salts. The green vegetables, especially spinach, furnish phosphorus which the child needs in order to adequately use the lime salts). No alcoholics. During the last six weeks, reduce the amount of fats in eating.

7. Keep the breasts free from pressure. Bathe the nipples once a week with tincture of green soap, carefully washing them and drying them afterwards. Anoint them daily with albolene.

8. Once a week, measure the amount of urine passed during the entire twenty-four hours. The amount should be three pints, or more.

9. Report either by telephone or office call when you are troubled with nausea, vomiting, headache, swelling of the feet or eyelids, or any other abnormality of your health. Report to me also any decrease in the amount of urine you are passing, and also if there is any hemorrhage from any part of the body.

10. Sleep on alternate sides. During the last month, knead the abdomen very gently for a few minutes to relieve the baby from a cramped position.

11. Make weekly visits to the office throughout your pregnancy.

12. When labor begins, or if the waters break,

or blood-stained mucus appears, notify me and go to the hospital.

13. Six weeks after delivery, come to the office for examination.

14. One year after baby is born, return with baby for "follow-up" examination.

#### A PLEA FOR THE MORE CONSERVATIVE AND INTELLIGENT TREATMENT OF GONORRHEA\*

MILTON M. COPLAN, M.D.,

and

ROY J. HOLMES, M.D.,

Miami.

Dr. Henry J. Farbach of Louisville, Ky., in an article on "General Observations on Gonorrhea," published in 1924, places the blame for all present day indiscriminate management of gonorrheal infections on the esteemed Dr. Valentine of New York City. To quote him, "A number of years ago Dr. Valentine advocated a plan of treating gonorrhea which has done more than anything else that ever happened to retard therapeutic progress in the management of this disease. He reported hundreds of cases of acute gonorrhea cured, on an average, within 14 days, by irrigations with potassium permanganate solution. Until the last few years this method was rewritten in every text-book on urology that I have ever seen." From this last statement we presume that Dr. Farbach meant to infer that Dr. Valentine so successfully inoculated his theory into the profession at large that until recently it was accepted as an uncontested truism.

Granting that Dr. Valentine's practice was a bad one and that it has had its ill effect, we cannot see that he is alone the culprit who has hindered the therapeutic progress of the disease. Alongside of his must be placed the names of those men who have advocated countless other pet theories equally as viscious, principle among them being the gonococci vaccine fanatics. And these few remarks lead us to this emphatic accusation: every man within the medical profession who accepts the responsibility of administering to one unfortunately infected with the gonococcus, yet who has no accurate knowledge of the anatomy and physiology of the parts involved, the mode of invasion, life cycle of the gonococcus, and pathology produced, is just as guilty of re-

\*Read before the meeting of the Florida East Coast Medical Association, West Palm Beach, Nov. 10, 1927.

tarding the progress of scientific medicine and harming society as those men whose particular theories have brought them into the limelight. In a concise, yet sufficiently detailed manner, to permit complete handling of the subject, we shall attempt to bring before you those facts which have caused us to issue a plea for more conservative treatment of gonorrheal urethritis in the male. Our opinions are neither individual nor original; we have, however, coupled our personal observations and deductions with the researches and clinical results of many authorities, thereby giving us a sound basis for every statement that shall follow in the progress of this discussion. At this point we must digress momentarily to voice appreciation of the magnificent contributions to the subject of gonorrhea by Dr. P. S. Pelouze of the Department of Urology, University of Pennsylvania. For many years he has devoted his entire thought to this one big problem confronting medical science, until today his views are no longer hypothetical; they are unmistakably correct and practical.

We shall omit a description of both the gross and minute anatomy, as well as physiology, of the genital tract since we have only limited time but shall bend every effort toward a discussion that will not leave you "grasping in the dark." For a complete account of these forementioned phases we refer you to any modern text-book on urology and venereal diseases. In order to permit clear understanding of why we urge conservative therapeutics, we must speak for a moment of the mode of tissue invasion of the causative organism and picture the course of the disease. First then we explode the ancient incubation period theory. Investigation in recent years has proven that the gonococcus attains a luxuriant growth in 48 to 72 hours. Why the urethral discharge does not appear at this time will be shown in the progress of our discussion. Once the organism has entered the meatus it does not require three or four days to find its way to the fossa navicularis as we had supposed, for surely it would not survive the flow of urine against which it must travel. On the other hand it can be definitely stated that it travels rapidly toward its natural habitat, the columnar mucus membrane of the urethra. It is not the nature of the bacteria to remain on the surface, so what really occurs is that the gonococci from the moment they reach their site of election begin to find their way not into the individual cells but

into the intercellular spaces of the mucosa; even into the submucosa and at times into the corpus spongiosum. Here they begin their actual life cycle, the result of which is an inflammatory reaction that varies in different individuals. The direct result of this irritant is capillary engorgement with consequent marked escape of serum and an outpour of polymorphonuclear leucocytes. The current of flow is toward the urethral lumen and hence towards the meatus—it is nature's best means of combating infection. It has been conclusively shown that phagocytosis and leucocytosis occur almost solely on the surface and that they have no bacteriocidal effect on the gonococcus; further that they aid in arresting the diseases only by their action in removing a few gonococci from the lumen. The tissue diarrhea is of value. The irritant in turn produces exfoliation of the surface columnar cells and they are replaced by squamous epithelia, a less nutritious food for the surface gonococci.

Contrary to former belief it is not a toxic material produced by the living gonococcus that is the irritant. It is simply a toxin produced by the self-destruction or autolysis of the organism together with disintegration of the cell. This toxin is commonly and appropriately termed gonotoxin. The gonotoxin, or endotoxin if you please, stimulates the tissues to the formation of anti-substances, a process that is very slow in the beginning. And it is this anti-substance, along with bacteriolysis, that plays the great part in the cure. Experimental workers call our attention to the fact that the stages of the life cycle of the organism are shortened or prolonged by the slightest influences. And, just as we have pictured the invasion of the urethral mucus membrane, so does invasion occur in the various glands and associated structures of the genital tract; with, of course, the slight variations occasioned by the tissue composition of the particular part.

We arrive then at our first conclusions:

1. That a broad knowledge of the anatomy and physiology of the genital tract is essential to a proper understanding of the behavior of the disease, and that a clear conception of the mode of invasion of the gonococcus, the life cycle of the germ, and pathology produced will facilitate a proper appreciation of the course of the infection.
2. That the incubation period therefore covers the periods of transit, tissue penetration, growth

of the organism, and autolysis of the germ, plus the time elapsing between toxin liberation and suppurative responses to the endotoxin.

3. That only insofar as we work to increase the physiological reactions of the tissues to the irritant shall we curtail the course of the infection.

4. And that only as we favor a more rapid cell disintegration and bacteriolysis shall we aid in shortening the course of an infection which Dr. E. L. Keyes ably states is "in the adult male a self-limited venereal disease."

What does all of this mean to us, you ask? And the explanation is simply that the rate of elimination of the infection is directly dependent on free surface drainage and absence of trauma; most favorable then when surface drainage is at its best and trauma at a minimum. Here we are forced to remind you that the genital tract must be free of obstruction from the meatus back to the very end ramifications of prostatic acini. Free drainage primarily encourages tissue diarrhea, which results in clean, healthy tissue and clean healthy tissue is poor food for gonococci. Free drainage promotes cell disintegration and bacteriolysis and these factors govern respectively diminution of the bacterial growth and liberation of the endotoxin which is directly responsible for anti-substance formation.

The effects of trauma need but little elaboration. The sensible deduction is that traumatized tissue is incapable of properly carrying out physiological function; including excretory power or withstanding the attack of invading bacteria which seek food. Also that sound cell infiltration and subsequent scar tissue formation are the end results of trauma and scar tissue is certainly prohibitive to free tissue drainage.

It is very evident, therefore, that irrigations of whatever the antiseptic are contraindicated in any acute case of gonorrhea: first, because they carry organisms occupying the surface mucosa backward in the urethra to non-infected tissue which, thanks alone to God's wisdom in placing a douche can—the bladder behind the male urethra—has remained free of invasion; second, most irrigations employed are of such a concentration that they destroy the surface epithelium, leaving it a mass of debris to obstruct the more minute urethral follicles and thus hinder drainage of that all-important tissue, the submucosa; or through their astringent action produce the same effect. In fact such anti-septics, if admin-

istered even by hand injection, are equally abusive. If used during the reparative stage they wash away the newly deposited replacement epithelia as rapidly as nature lays it down.

And so it is with instrumentation in the early stages of the disease. Its greatest harm is trauma and its only good is a psychic effect on the patient. The edema alone that results is sufficient to block the ordinary urethra, not to mention the scar tissue deposited in the areas of open abrasion. We shall relegate vaccine therapy to the discard by simply stating that so far as we are able to discern its only value lies in stimulating leucocytosis, which in itself plays but little part in combating the infection and which is sufficiently cared for by the infection per se. Further that vaccines only add to the labor of a body tissue that is making every effort to form anti-substances to a definite endotoxin in that they force the body to form anti-bodies for a dozen irrelevant types of cocci. It has been our observation that diathermy offers nothing but trouble. Possibly some of you have had more favorable experience with it.

How then is a case of specific urethritis to be treated conservatively? When the patient first presents himself take the time to outline for him the nature of the infection and its behavior. Explain to him that you will be only an aid to his getting well; that you will show him how to best take care of himself. Impress upon him that there are no antiseptics sufficiently active to destroy the gonococci by direct contact without also destroying the tissue involved and inhibit its physiology. Let it be known that the drug you employ is a mild one, the prime purpose of which is to keep the surface of the canal clean. Such early instruction will prevent many patients from seeking the various "Knoxem" preparations dispensed by your corner drug stores. In other words, obtain the confidence and cooperation of that class of patients who, due to the gouging of thousands of quacks that have invaded the field of venereal practice, come to you skeptical from the outset. Above all do not promise an early cure—gonorrheal urethritis does not get well in three or four weeks. Have the patient understand that his own body resistance, tissue reaction to the drugs you employ, and the care he takes of himself will control the time element; three factors that do not lend themselves readily to prognostication. See your patient daily until he has safely passed the acute



stage of the infection. We employ only one injection daily and that only 3 or 4 c.c. of a very mild antiseptic such as neo-silvol or silvol. Not until the discharge is practically gone is a patient given an injection to administer to himself twice daily. At this time there is very little danger of his doing harm. It is wise to see your patient at least every other day until you are reasonably certain that he has mastered the knack of using his syringe. Just as long as the infection confines itself to the anterior urethra so should the treatment be confined to this area. Do not encourage trouble by "going after" the prostate gland, etc., until there is every evidence to believe the urethra has become free of infection. Never allow a patient to inject into the posterior urethra. If it becomes necessary to treat this sector have him come to you for this care.

Diet plays but little part—so we allow our patients to eat what they desire. It is forcibly impressed, however, that they must abstain from alcohol in any form.

Antiseptics by oral administration are no value, but free imbibition of water is, and we specify that at least one glass of water per hour be consumed. The effect of this is evident and needs no emphasis here.

And as you bend your efforts to avoid complications, instruct your patient to avoid the things that lead to them, such as sexual excitement, too strenuous work and allowing the bladder to become distended with urine.

When you have every reason to believe that the urethra is possibly well then moderate instrumentation has a place. Gently pass a boulé into the urethra to determine if there are any strictures or granular areas formed. If so a series of sounds skillfully passed is practical. Next examine the prostate gland; should you find pus, and in most cases you will, it is advisable to institute a program of very mild prostatic massages at four to six day intervals.

Under such conservative treatment there are very few early cures; we do not claim to get them. In fact we believe that our cases are under treatment for a longer period of time than the text-book average. But we do claim that our results are more satisfactory from the very onset of the case. From the beginning the patient usually worries us with such questions as, "Doctor, why do I not have the great pain that I have always been told is associated with a case of gonorrhea?" or this statement, "I do not under-

stand how this can be the gonorrhea for it does not pain in the least, and when I had it before it almost killed me." And further we are confronted with very few troublesome complications such as are a source of grief to the physician and a real menace to the future health of the patient. In the past two years we have treated an average of 20 cases of gonorrhea daily, many of whom, of course, found their way to us from other physicians, and in some of whom complications were already established. But of those cases that came to us from the very onset of their infection we can report only 12 cases of epididymitis, two cases of prostatic abscess and one case of acute gonorrheal arthritis. Does this compare favorably to the text-book and clinic reports that 20 to 30% of all gonorrheal infections are complicated by acute epididymitis? Such data are not presented boastfully but simply to show you that the ratio of complications is in direct proportion to the mildness or severity of the treatment.

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#### CESAREAN SECTION—WITH A REVIEW OF TWENTY-ONE CASES\*

THOS. W. HUTSON, M.D.,

and

J. RAYMOND GRAVES, M.D.,

Miami.

In reviewing the literature, we see this subject discussed more in the past year than ever before. The discussion is based mainly on the two questions: (1) When is a Cesarean section justifiable? (2) How or where shall the incision be made?

We feel that a Cesarean section is indicated and justified in any condition where we will be able, in our judgment, to deliver by section with more safety to the mother, both as to her immediate condition and to her future health. The health and life of the mother merits our special consideration for only exceptionally does the performance of the operation per section add to the foetal risk.

Pelvic contraction is unquestionably the most frequent indication for Cesarean section and is demanded in absolute contraction regardless of how long the patient has been in labor. In relative contraction of the pelvis we are guided by the general condition of the patient, position,

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\*Read before the Florida East Coast Medical Association, West Palm Beach, November 10, 1927.

condition of the child and relation of the size of the child and the pelvis as revealed by careful X-ray study. In measuring our patients we always take both the measurements at the brim and the outlet.

Eclampsia and pre-eclamptic toxemia are conditions which are always open for discussion as to the advisability for this operation. As the laity become better educated as to the value of prenatal care we believe that eclampsia will be eliminated. We have not had the experience with the medical or expectant treatment of eclampsia and believe that the eclamptic should be delivered as early as possible, if she be a primipara, the cervix not dilated, by immediate section, this followed by active elimination. Fortunately we have had only one eclamptic, this one being referred after having had several convulsions.

Marked pre-eclamptic toxemia, we feel, should be treated expectantly for twenty-four to forty-eight hours; if they show improvement this should be kept up and delivered in normal manner; however, if they show no improvement, we feel they should be delivered immediately, primipara especially, by Cesarean section.

Premature separation of normally situated placenta we feel should warrant this operation unless the cervix is dilated or easily dilatable and measurement ample. We have had three in the past two years all associated with marked pre-eclamptic toxemia. One of these, a multipara, was delivered by rapid dilation and version and made one of the stormiest recoveries we have ever seen an obstetrical patient make. We saw a similar case in consultation shortly afterward that had been delivered by a family physician, that went into collapse about three hours after delivery. Although there was no excessive loss of blood, this patient presented the picture of exsanguination and died while we were obtaining blood for transfusion. Two other cases seen later were referred to us in extreme shock, the babies were dead. Rapid immediate sections were done, followed by blood transfusions; they both made smooth uneventful recovery. Upon opening the abdomen in both cases, there was an extravasation of bloody fluid in the peritoneal cavity, the uterus was mottled with an extravasation of blood and, upon section, showed marked separation of muscle fibers.

Central placenta previa, we believe, should, if recognized early, always be sectioned. The cardiac cases we see in obstetrics usually, if under

careful prenatal care, can be delivered normally if the presentation and position is normal. We have sectioned one cardiac case. This was one referred to us, a primipara breech presentation and membranes ruptured, not in active labor. There was slight decompensation, which at intervals had been more marked throughout her pregnancy.

Obstructive tumors, atresia of vagina, distocia following previous pelvic operations: We have not had any of these conditions in our series. Some obstetricians consider certain malpositions of the foetus as indications for this operation. These, however, usually can be delivered by vagina. As to the patients who have had previous sections. It is true that certain men deliver them normally, but there is always a certain risk due to rupture of the scar and we believe this risk is greater than that of Cesarean section at the time of election.

To summarize, I quote Lull of Jefferson Medical College, "It is not the absolute indications for this operation which lead the obstetrician astray, but mainly because we have allowed a certain amount of elasticity to creep into our teaching." This, I believe, is perfectly justifiable in conscientious hands, and results, if not in the actual saving of lives, the placing back in the homes of women who are physically capable of taking care of their newborn children and not chronic invalids from mutilation with obstetric forceps.

In those cases which we have had under our care throughout their pregnancy and have decided to section we usually post them a few days before the expected date of confinement; however, in some border-line cases we give a test of labor. In some cases the decision to operate is made after prolonged labor and this, it is agreed by all, tends to increase the morbidity and mortality rate.

In preparing a patient the abdomen and external genitalia are shaved, cleaned and painted with iodine. In addition we paint the vagina of all patients whether they have been previously examined or not with either 3½% iodine or 5% mercurochrome. The bowels are emptied by enema, the bladder by catheterization. The patients do not receive a preliminary hypodermic of morphine and atropine. On two occasions this has been given through error and the resuscitation of the child has been prolonged. We use gas induction followed by ether anesthesia.

Our incision is made from just above the symphysis to the left of the umbilicus and slightly above it. The abdomen opened in the usual manner, one hand explores the abdomen, sweeping around the uterus in search of adhesions, if they be present and we feel that they will interfere in any way they are clamped, cut and tied. Next we place a large moist pack around the uterus, starting at the bladder, going around one side, packing the intestine off above and behind, and back down the opposite side. The pregnant uterus is usually in dextra rotation and should be rotated in a straight line before being incised. Next we make a stab incision well up on the fundus of the uterus in the midline. A finger is thrust through this incision to see if we are in the uterine cavity. Then the incision is enlarged downward, using an ordinary pair of bandage scissors. The child is grasped by the feet or buttocks and extracted. The assistant then with the right hand brings the uterus up in the abdominal wound, injects 1 c.c. of obstetrical pituitrin into the wall of the uterus, places the left hand back of the uterus and grasps the round ligaments and tubes, forcing the thumb and fingers well down on the lower uterine segment below the incision and by pressure controls the hemorrhage. The cord is cut, the placenta and membranes are removed, the cavity sponged out and examined for any remaining membranes.

We use as our first suture in closing a No. 2-40 Day chromic catgut doubled. The ends are tied together and the first stitch is looped through. The first layer of stitches approximates the uterine muscles close to the endometrium, but does not include the endometrium; this is a continuous stitch drawn snug but not tight as this is muscle we are sewing. The sutures are anchored well at each end of the incision. Next we put in two similar stitches approximating the muscle beneath the peritoneal covering. The assistant then releases the pressure on the uterine and cervical arteries and the visceral peritoneum is closed over the incision with a lock stitch burying the knots at both ends. Usually there is no bleeding following these three lines of suture; however, if there be any bleeding we use a modification of the Philadelphia Lying-in Hospital mattress suture, using No. 1 plain gut on a small needle.

The pack is then removed from the abdomen, the posterior cul-de-sac sponged out and the abdomen closed in layers. In those cases that have

had vaginal examinations we start in immediately to treat as if they were infected. They are put in Fowler's position, ice cap to abdomen and proctoclysis of 5% glucose and soda given. If there is much post-operative vomiting the stomachs are washed with two quarts of 5% bicarbonate of soda. All cases have the usual opiates for pain and the usual post-operative care. Pituitrin or ergot is administered as indicated. We have not found it necessary to pack any of these cases. We prefer this operation to the low cervical. We have done it after patients have been in labor twenty-four hours, have had several examinations and one case that had had an induction of labor. We have done only one low cervical section, several years ago and not included in this series; the incision became infected and drained from around the bladder and cellular tissue at the base of the broad ligaments so that we reoperated twice believing that a sponge had been left in. We believe that the peritoneum if not too greatly insulted will take care of infections as well or better than the vascular cellular structures beneath the bladder. Frankly, infected cases with temperature, foul discharge, etc., if sectioned at all, we feel should have a Porro section, amputation at cervix. We have seen one such case in consultation, not in this series, that made an uneventful recovery.

In our series we have had one case of phlebitis that made a perfect recovery. Once, infection of abdominal incision that drained 28 days and recovered and one post-operative embolus that died.

In our series we have had ten sections for contracted pelvis, four for pre-eclamptic toxemia, two for premature separation of placenta, two for previous operation, one of which was the fourth section, one for placenta previa, one for cardiac decompensation and one for high transverse arrest.

We lost one mother out of the twenty-four cases or a mortality of 4.2%, this death being due to an embolus. We lost no babies that were at term and alive at time of operation. Four stillborns were delivered. Twins in the placenta previa case and the two premature separation of placenta. The average period the patients were in the hospital was 14 days. The longest stay 25 days, the shortest 11 days. All patients were examined at the end of six weeks and showed uterus with normal involution and no evidence of infection or complications.



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## CHOLECYSTOGRAPHY

The advancement of the diagnosis of gall-bladder disease has been marked since the general use of tetraiododphenolphthalein of soda. It requires a most careful technique and minute attention to details. It is a strong point of evidence when carefully used but must be taken with the clinical picture and clinical evidence in the case and not relied upon as an absolutely positive and negative type of evidence.

Those who use the intravenous method have little interest in the oral one. The oral method is, however, of great value but probably requires more care and attention to details. Many good liquid preparations of the gall-bladder dye are on the market. It is unwise to allow the patient more than a very moderate amount of food within two or three hours of the time the dye is taken. This food should be those articles quickly digested. They must absolutely avoid food and the odors of food until the films are made. Really, only water should be allowed. Laxatives or a laxative action of the dye will not interfere with obtaining a well-filled gall-bladder.

It must be remembered that the gall-bladder is a freely movable organ and may fall underneath the shadow of the vertebra or under the bony ilium. Appropriate pads will often bring into view a well-filled gall-bladder that was thought previously to be empty.

The reaction to the intake of food and the manner of emptying of the gall-bladder is the principal information obtained. Hence its reaction to a marked fat meal will give the greatest index as to its contractility and emptying ability.

Gall stones may be shown of the non-opaque type or others may be made denser by the dye, but such evidence must be carefully checked by many films before and after eating and in numerous positions, before being accepted as absolute evidence.

When in doubt as to any detail repeat the examination or check it with the intravenous method. Frequent use and minute attention to details are necessary to the accurate use of the method.

#### STATE NEWS ITEMS

Dr. Walter C. Jones, president of the Dade County Medical Society, read an interesting paper on "Hernia" before the Palm Beach Academy of Medicine on Wednesday evening, June 28th.

\* \* \*

Dr. L. E. Roper of Hollywood is taking post-graduate work in the New York Post-Graduate Medical School. He expects to return home about the 15th of August.

\* \* \*

The regular monthly meeting of the Sarasota County Medical Society was held July 9th at the Sarasota Hospital, Sarasota. Dr. J. R. Scully, city health officer, read, by invitation, a paper discussing tularemia. Dr. J. E. Harris read a paper on "Ringworm." Following the scientific program, refreshments were served.

\* \* \*

The DeSoto-Hardee-Highlands County Medical Society held its monthly meeting at Bowling Green July 10th. Dr. R. L. Cline of Lakeland read a paper on "Sinus Infection."

\* \* \*

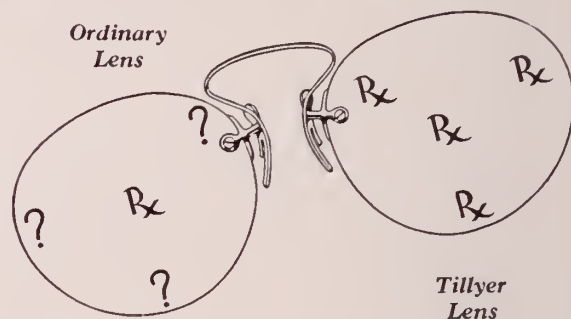
Dr. B. L. Arms of Jacksonville, State Health Officer, and Dr. D. E. Denney of the Public Health Service, recently visited Leesburg where they conferred with the City Health Officer, Dr. S. C. Wood.

\* \* \*

Dr. A. R. Beyer of Tampa recently made a trip to New York by aeroplane.

(Continued on page 106)

## to OCULISTS:



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## MEETINGS

County Society	Secretary	Date	Time	Place	Luncheon?	Dues Paid.
Alachua .....	J. L. Summerlin, M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	81%
Bay .....	D. M. Adams, M.D., Panama City.					100%
Bradford .....	Seeber King, M.D., Lake Butler.					67%
Brevard .....	I. K. Hicks, M.D., Melbourne.	Varies		Varies		79%
Broward .....	Leigh F. Robinson, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	88%
Columbia.....	P. C. Farnell, M.D., Lake City.	1st Monday.	7:30 P.M.	Chamber of Commerce	No.	100%
Dade .....	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	72%
DeSoto-Hardee-Highlands ...	C. H. Kirkpatrick, M.D., Arcadia.		8:00 P.M.	Varies	No.	94%
Duval .....	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Duval County Hospital	No.	96%
Escambia .....	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	85%
Hamilton .....	R. A. Barnett, M.D., White Springs.					
Hillsboro .....	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	City Hall	No.	87%
Jackson .....	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	100%
Lake .....	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes.	100%
Lee .....	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	53%
Leon-Gadsden-Liberty-Wakulla-Jefferson.....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	96%
Madison .....	Geo. O. Davis, M.D., Madison.					100%
Manatee .....	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	100%
Marion .....	J. L. Chalker, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	86%
Monroe .....	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	86%
Orange .....	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	80%
Palm Beach ...	S. W. Fleming, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	No.	80%
Pasco-Hernando-Citrus.....	T. F. Jackson, M.D., Dade City.	2nd Tuesday	8:00 P.M.	Varies	Yes.	100%
Pinellas .....	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Fla. Art School	No.	100%
Polk .....	Geo. C. Overstreet, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	75%
Putnam .....	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	92%
St. Johns .....	J. M. Irwin M.D., St. Augustine.	3rd Tuesday	8:30 F.M.	Varies	Yes.	100%
St. Lucie-Okeechobee-Indian River-Martin.....	C. L. Davis, M.D., Okeechobee.					83%
Sarasota ....	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	93%
Seminole .....	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		93%
Sumter .....	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	80%
Suwannee ....	W. C. White, M.D., Live Oak.					100%
Taylor .....	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia .....	R. L. Miller, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	92%
Walton-Okaloosa ....	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%



At the last monthly meeting of the Palm Beach County Medical Society, Dr. W. W. George read a paper on "Paroxysmal Tachycardia." \* \* \*

Dr. Clyde Brady of Leesburg died July 1st at his home from an overdose of a drug. Dr. Brady served as councillor during the past year, for the sixteenth district. \* \* \*

Dr. L. J. Arnold of Lake City is spending a few weeks in North Carolina. \* \* \*

The following members of the Florida Medical Association attended the annual meeting of the American Medical Association held in Minneapolis recently:

Chadbourn A. Andrews .....	Tampa
B. L. Arms .....	Jacksonville
Ernest Bostleman .....	Ft. Myers
Mary Freeman .....	Perrine
Robert F. Godard .....	Quincy
Roscoe H. Knowlton .....	St. Petersburg
Frederick F. Kumm .....	St. Petersburg
E. Sterling Nichol .....	Miami
Bascom H. Palmer .....	Miami
S. D. Rice .....	Gainesville
W. T. Simpson .....	Winter Haven
Walton C. Touchton .....	Avon Park
Walter D. Webb .....	St. Augustine
Carl A. Williams .....	St. Petersburg

\* \* \*

Dr. John E. Boyd of Jacksonville, chairman of the Committee on Hospitals and Medical Education of the state association, at the request of the staff, made an official inspection of the Alachua County Hospital on July 18th. That evening at the regular monthly meeting of the Alachua County Medical Society, Dr. Boyd and Dr. W. McL. Shaw of Jacksonville gave a lantern slide demonstration of "Surgical Problems of the Stomach and Duodenum." \* \* \*

The Suwannee River Medical Association held its regular monthly meeting at the Blanche Hotel, Lake City. About twenty members were present. Dr. Frederick J. Waas, president of the Florida Medical Association, discussed "Organized Medicine and the Function of the County Medical Society" in a most interesting manner. Following this, Dr. Shaler Richardson read a paper on "Some Practical Ophthalmological Points." A course dinner was served and a most enjoyable time had by all. \* \* \*

Dr. L. T. Furlow, who for the past year has practiced at Brooksville, is now located at Leesburg.

(Continued on page 108)

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Dr. S. D. Rice of Gainesville recently underwent a nasal operation at the St. Luke's Hospital, Jacksonville.

\* \* \*

Dr. J. M. Anderson of Sears was a recent visitor to Jacksonville.

\* \* \*

Dr. J. Knox Simpson of Jacksonville is spending his vacation in Alabama.

\* \* \*

Dr. T. H. Bates of Lake City expects to attend the Southern Pediatric Seminar at Saluda during the month of August.

\* \* \*

At its July meeting, the Columbia County Medical Society had as its guests Doctors L. W. Holloway and W. McL. Shaw of Jacksonville, who presented an interesting discussion of the "Thymic Syndrome," with a lantern slide demonstration. Dr. Shaw also presented a case report, with films, of "Spontaneous Pneumothorax in a Child."

\* \* \*

Dr. George L. Bates of Daytona Beach is spending his vacation in Morrisville, Vt. Dr. Bates expects to return about October 1st.

\* \* \*

Dr. H. A. Peyton of Jacksonville has recently returned from a motor trip to Washington, D. C.

\* \* \*

The Duval County Medical Society at a recent meeting voted to place a copy of Hygeia in every school library in Duval County. This is a worthy move on the part of the society in promulgating health education and should be adopted by other county medical societies over the state.

\* \* \*

Dr. J. H. Dyer of Lake City is spending his vacation in his old home in Tennessee.

\* \* \*

Dr. Stewart G. Thompson, business manager for the Journal and statistician for the State Board of Health, Jacksonville, is making an official visit to the state bureaus of vital statistics in North Carolina, South Carolina, Georgia, and possibly Alabama. The scope of the Florida Bureau has been considerably enlarged since the centralization of marriage and divorce records in this state.

\* \* \*

Dr. F. K. Herpel of West Palm Beach is spending his vacation in Europe and plans to attend the Second International Congress of Radiology in Stockholm in August.

(Continued on page 110)

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At an executive meeting of the State Board of Medical Examiners held in Jacksonville June 11th, the license of Dr. Joseph Napoleon Tessier was revoked on the grounds that he made a false affidavit to the Board in November, 1927. Dr. Tessier's license from Massachusetts was revoked December 16, 1926.

\* \* \*

The Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society held its quarterly meeting in Monticello July 12th at 3.30 p. m. Papers were presented by Drs. Robert McIver and Shaler Richardson of Jacksonville, Henry Palmer, Tallahassee; A. L. Blalock, Madison, and J. Q. Folmar of Chattahoochee. Dr. McIver and Dr. Richardson were invited guests. Following the scientific program, Dr. J. B. Brinson arranged a delightful swimming party. A supper was served in the evening at the home of Dr. and Mrs. Brinson which was followed by numerous impromptu speeches. The society and guests gave Mrs. Brinson a rising vote of thanks for her hospitality.

\* \* \*

The following physicians passed the last examination given by the State Board of Medical Examiners in Jacksonville, held in June:

Andrews, Edwin H. ....	Cedar Key
Aragon, Adolfo E. de ....	.....
Balley, S. Marion ....	Tallahassee
Bell, Kenneth R. ....	Emory, Ga.
Boone, J. W. ....	Kansas City, Mo.
Brink, F. A. ....	Jacksonville
Brunson, Joseph Evans ....	Lakeland
Connon, A. B. ....	La Salle, Ill.
Curtis, Walker Lewis ....	College Park, Ga.
Deedera, C. ....	Winter Haven
Doctor, William R. ....	Miami
Egle, Edwin G. ....	Arcadia
Elliston, Leroy Bertram ....	La Salle, Ill.
Elliston, Robert L. ....	La Salle, Ill.
Ford, Robert B. ....	Tuskegee, Ala.
Foucher, Kenneth R. ....	Augusta, Ga.
Guerra, Julio J. ....	Tampa
Jackson, Alfred J. ....	Orlando
Jenkins, Hughes Brantley ....	Macon, Ga.
Jones, William Wardlaw ....	Atlanta, Ga.
Koger, E. B. ....	Miami
Leach, Miford Arthur ....	Orlando
LeBreton, Prescott ....	Buffalo, N. Y.
Merchant, H. M. ....	Gainesville
Mock, A. E. ....	Pensacola
Newton, Robley D. ....	Ft. Myers
Nolan, T. L. ....	Marietta, Ga.
Norris, Johnnie Andrew, Jr. ....	Piedmont, S. C.
Pender, M. S. ....	Sneads
Quasser, A. B. ....	Portsmouth, Ohio.
Rawlings, C. L. ....	New Harmony, Ind.
Russell, R. E. ....	Atlanta, Ga.
Rutter, Joseph Howard ....	Daytona Beach
Scheffel, Carl ....	Miami
Shoemaker, Samuel Anise ....	Bluffton, Ind.
Smith, Joseph A. ....	Chicago, Ill.
Stebbins, Alvin L. ....	Palmetto
Stormont, Riley M. ....	Webb City, Mo.
Strange, James L. ....	Jacksonville
White, Alvyn W. ....	Pensacola
Williams, John L. ....	Tallahassee
Womack, David R. ....	Tampa
Wright, Nelson A., Jr. ....	Miami
Young, Wilburn Cogdell ....	Tampa

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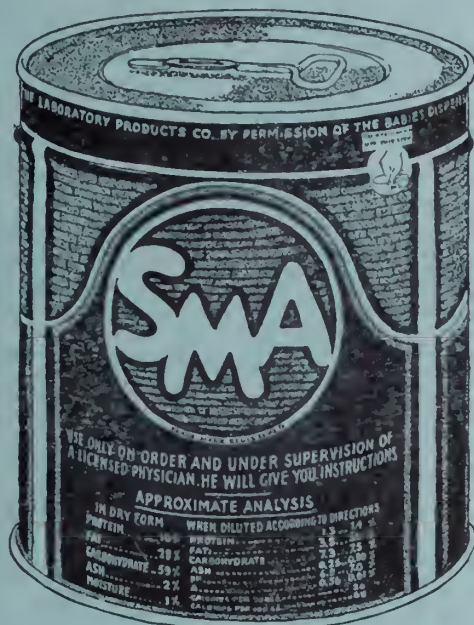
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1. Jour. A. M. A., May 3, 1924, p. 1434.
2. Jour. Inf. Diseases, Jan. 1918, p. 80.
3. Jour. A. M. A., May 5, 1923, p. 1301.
4. Med. Jour. & Record, May 19, 1926, p. 641.

# THE JOURNAL

— OF THE —

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### CONTENTS

	PAGE		PAGE
The Roentgen Observation of Duodenal Lesions... <i>Bundy Allen, M.D., Tampa.</i>	129	Pyelitis ..... <i>R. M. Klussman, M.D., Ft. Lauderdale.</i>	151
Gastric Hyperacidity: Its Recognition, Cause and Management ..... <i>Marvin Smith, M.D., Miami.</i>	135	Congenital and Acquired Heart Conditions in Childhood ..... <i>E. H. Cowell, M.D., Bradenton.</i>	156
Some Psychoses in Which There May Be Recovery. .... <i>W. M. Bewis, M.D., Bartow.</i>	139	Adenomyomas ..... <i>Cayetano Panettiere, M.D., Miami Beach.</i>	157
A Study of External Otitis..... <i>L. C. Ingram, M.D., Orlando.</i>	142	Editorials: (1) Increase in Representation in House of Delegates of American Medical Association. (2) Our Next Scientific Program. (3) Increase in Size of Journal. (4) Causes of Sickness Among Males and Females at Different Ages. (5) Annual Meeting of American College of Surgeons....	160-162
Fractures of the Spine..... <i>Edward Jelks, M.D., Jacksonville.</i>	145	State News Items.....	162-170
Some Surgical Diseases of Meckel's Diverticulum.. .... <i>Leigh F. Robinson, M.D., F.A.C.S., Ft. Lauderdale.</i>	147	Classified Ad. ....	170
Personal Observation on Certain Cases of Asthenia in Southern Florida..... <i>M. Jay Flipse, M.D., Miami.</i>	149		

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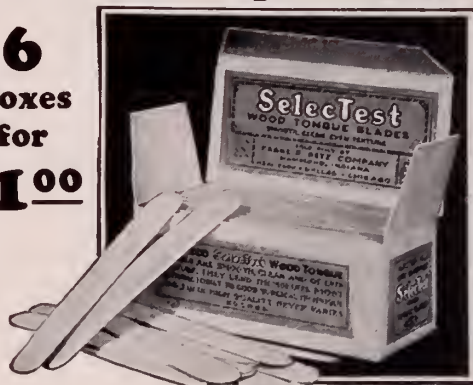
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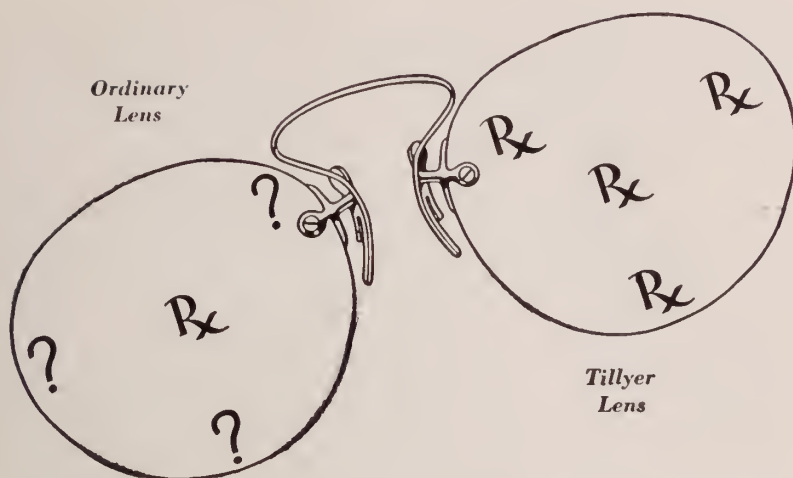
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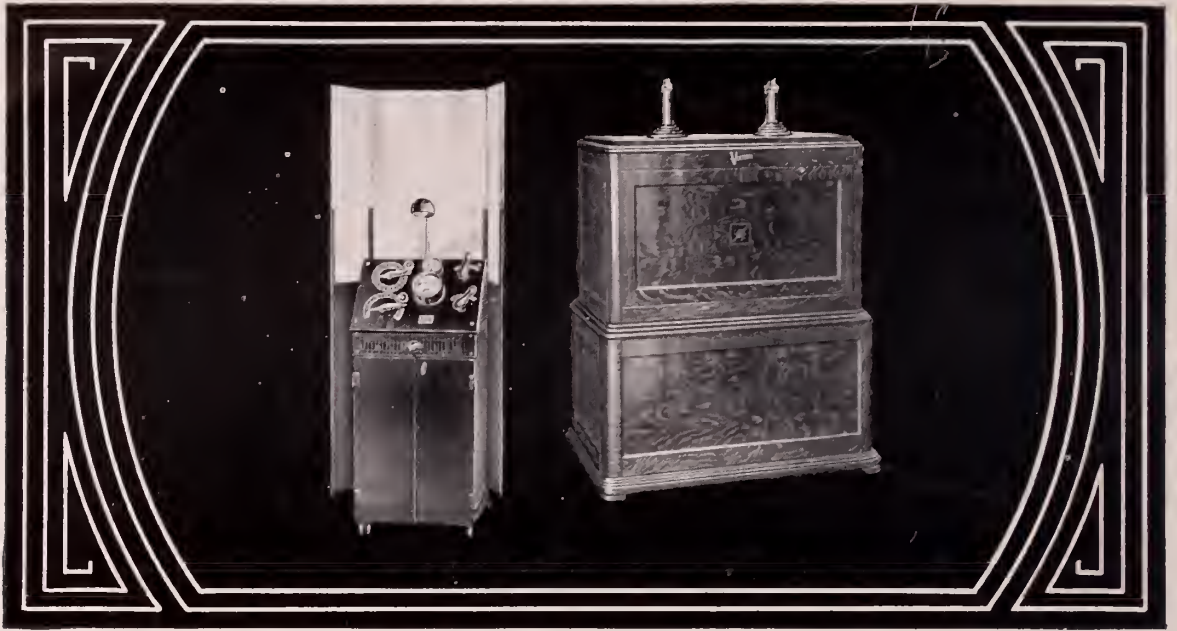
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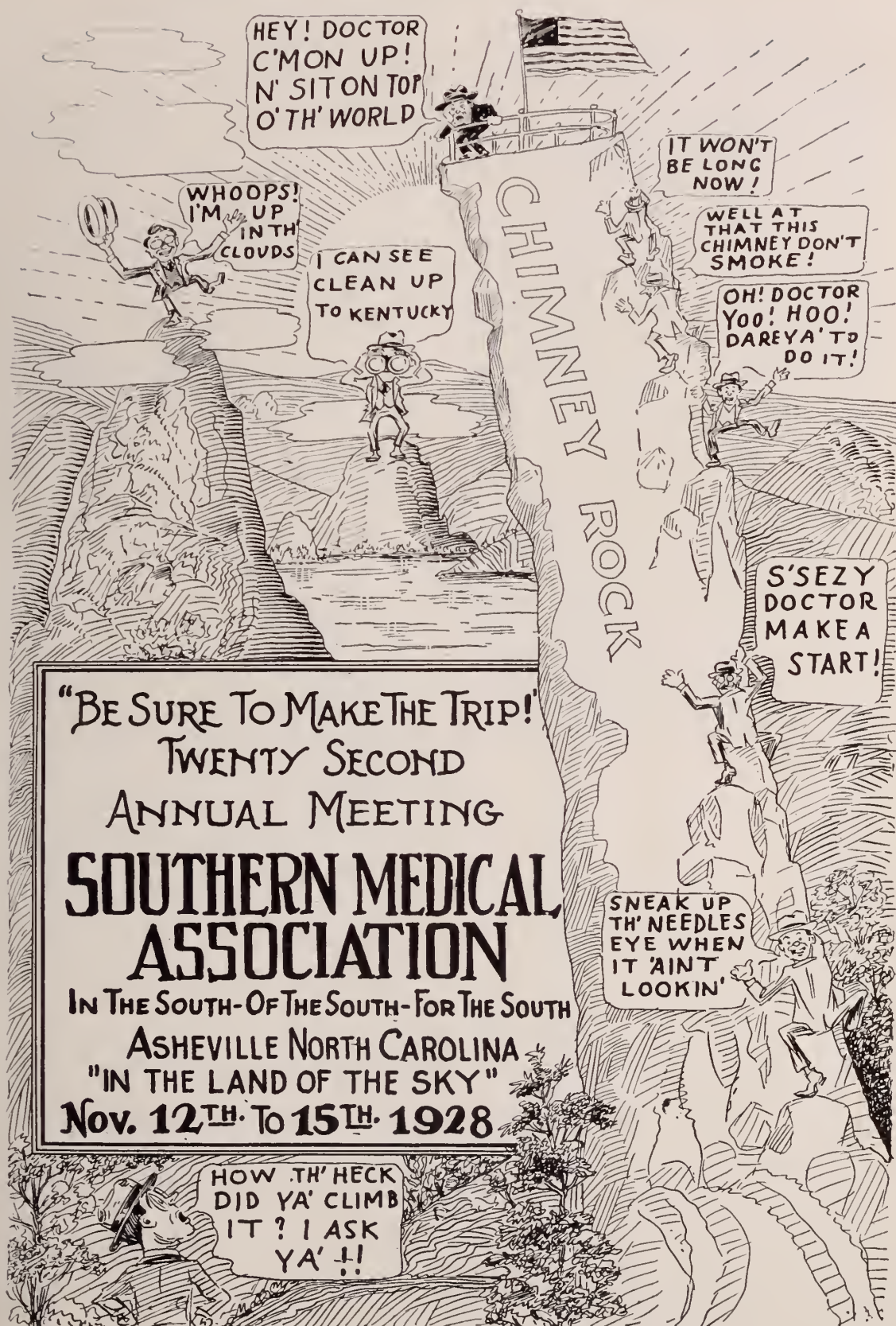


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### CONTENTS OF BOOKLET

Advantages.....	5
Description.....	6
Preparation.....	7

#### INDICATIONS AND TREATMENT

Alimentary Intoxication.....	8
<i>(Cholera Infantum, Ileocolitis)</i>	
Celiac Disease.....	12
Colic in Breast-Fed Infants.....	10
Decomposition.....	10
<i>(Marasmus, Atrophy)</i>	
Diarrhoea in Breast Fed Infants....	9
Premature and New-Born Infants....	11
Bibliography.....	16

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## THE ROENTGEN OBSERVATION OF DUODENAL LESIONS\*

BUNDY ALLEN, M.D.,

Tampa.

A paper on duodenal lesions without frequent reference to the stomach is, to say the least, impractical; therefore, references will be made to gastric lesions also.

A study of the records of the Mayo Clinic over a period of five years by Doctor Southerland<sup>1</sup> bears out the statement that no other organ in the human body has been accused of so many disorders which it never had, as has the stomach. During the five-year period 19.6 per cent of the total number of patients registered were referred for roentgenologic examination of the stomach and duodenum. In 70 per cent of these cases the roentgenologic data were negative.

A brief survey of the history of duodenal ulcer reveals some interesting points.

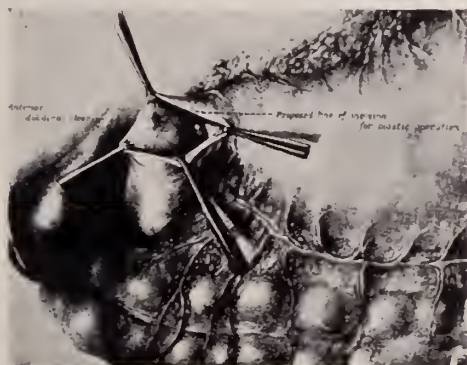


Fig. 1—Artist's Drawing. Mucous Surface of Ulcer on Anterior Wall of Duodenum. (George & Leonard).

According to Robertson and Hargis casual mention of this disease entity was made by de Muralto in 1688. Careful scanning of the literature failed to reveal any comprehensive study prior to the work of Krauss in 1865. In 1914 a signal advance was made when Cole called attention to the bulbar deformity of the duodenal cap. Previous to this time the diagnosis of duodenal ulcer was based on various combinations of indirect roentgenologic signs—always in conjunction with the clinical diagnosis.

*Morbid Anatomy and Pathology.*—Ninety per cent of gastric ulcers are found at the pyloric end; nearly all duodenal ulcers are in its first or ascending portion, and more than one-half extend up to or within three-fourths of an inch of the pylorus, while twenty per cent involve the margin of the pyloric ring (Mayo).

W. J. Mayo was among the first to recognize that duodenal ulcer exists in two forms: the in-



Fig. 2—Duodenal and Gastric Ulcer.

durated, calloused ulcer which can be seen and felt from the serosal surface, and the nonindurated ulcer which cannot be seen from the outside, cannot be palpated, and is, indeed, recognized with difficulty even with the intestine opened, since its site is sometimes marked by only a minute abrasion of the mucosa.

*The Peptic Ulcer, Gastric and Duodenal.*—The round, perforating, simple or peptic ulcer is usually single and occurs in the stomach and in the duodenum as far as the papilla. They may be multiple. The ulcers may be pin point or large; some have been reported to be 6x8 cm. in size.

Duodenal ulcer, as shown by the records of the Mayo Clinic, is the most common of all lesions seen roentgenologically in the alimentary tract. As determined by the roentgen ray, duodenal ulcers occur more than nine times as often as gastric ulcers, and more than four times as often as gastric carcinoma.

*Complications.*—Hemorrhage and perforation are the most serious complications; these oc-

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

<sup>1</sup>Radiology, Feb., 1927, page 111.



curred in 28.1 per cent of 1,871 cases collected by Musser. Duodenal perforations occur oftener than gastric perforation; the proportion is about four to one.

The diagnostic sign obtained by the X-ray in the examination of ruptured duodenal or gastric ulcers is the presence of gas between the diaphragm and the liver. The gas may not always be demonstrated; however, the gas is probably present in practically all cases. The reason that the demonstration is not always made is due to the fact that in many cases the patient is not in a condition to be easily examined in the proper position. Virtually all patients with a ruptured ulcer may be observed on a tilting fluoroscope without much risk. The absence of gas below the diaphragm does not negative the diagnosis; its presence makes a presumptive diagnosis positive.

The roentgen observation of gastric and duodenal lesions must necessarily be roentgenoscopic and roentgenographic. Very few, if any, lesions are demonstrated on the films that cannot be seen fluoroscopically. The fluoroscopic examination is always the most important.

Our attention is frequently directed to duodenal lesions by the eccentric emptying of the contrast medium through the pyloric opening. Formerly much attention was paid to the rate of emptying. A rapid emptying rate was often sufficient to diagnose a duodenal lesion. Today this indirect sign is not of such material value, because we know that the rapid rate of emptying may be caused by the nervous state of the patient; therefore, relaxation of the patient is very essential. We are today depending for our diagnosis of duodenal lesions on what we call direct signs. I have reference especially to filling defects of the cap and elicitation of pain and tenderness on palpation and manipulation under fluoroscopic observation. A filling defect to us means a duodenal lesion. However, the size of the filling defect does not indicate the size or severity of the lesion. We are unable to tell the seriousness of the lesion by the extent of the filling defect. A filling defect, however, is not always necessary for the diagnosis of a duodenal lesion; a positive diagnosis may be made from the elicitation of definite localized pain and tenderness on pressure over the lesion area observed under the screen. This pain and tenderness is the most constant and distinct feature of duodenal ulcers. These examinations must be made with circumspect



Fig. 3—Ulcer at the Pyloric Ring with a History of Perforation.



Fig. 4—Gastric Ulcer with a History of Perforation.



Fig. 5—Duodenal Ulcer: Incisura Type of Bulbar Deformity. Incisura at 1.

care, as rupture or perforation may be induced by careless or too vigorous manipulation.

Here I wish to record a new sign (I say new because I have been unable to find it mentioned

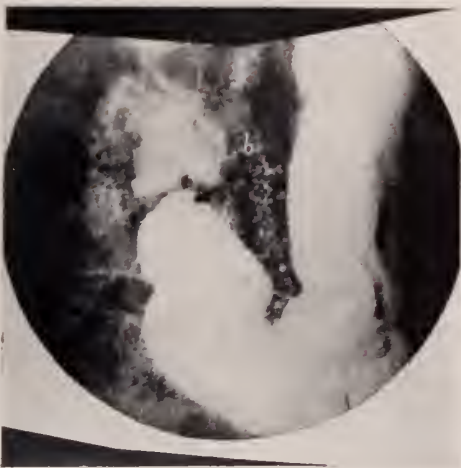


Fig. 6—Duodenal Ulcer with Deformity on Base at B.

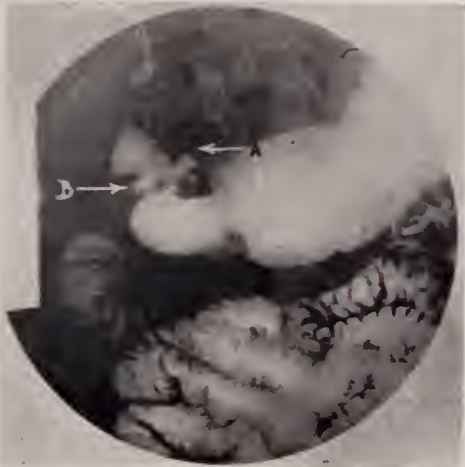


Fig. 7—Chronic Ulcer Producing Deformity at A & B.



Fig. 8—Ulcer Producing Bulbar Deformity. Incisura Type.

cases, but roentgenologically negative for any direct evidence. By direct evidence I mean filling defect and pain and tenderness upon palpation and manipulation. Several of them came to operation which proved the clinical diagnosis to be correct. Under the fluoroscope these patients had no pain or tenderness upon pressure over the duodenal area, but were definitely sensitive to pressure in the median line just above the level of the pylorus. As yet I have not seen a sufficient number of these cases to boldly venture a positive diagnosis upon this solitary direct sign, but its possible value is to me very intriguing.

*Duodenal Diverticulæ.*—These, while thought rare, occur more frequently than was at first supposed. There are no characteristic symptoms from which a diagnosis can be made clinically. Professor Grant of the University of Manitoba injected the duodeni of all cadaverins brought to the dissecting room since 1922, and with regularity he found diverticulæ present in two out of every twelve specimens examined. In the bodies examined over a period of three years diverticulæ were present in 16.2 per cent. Case's statistics show that diverticulæ of the duodenum were demonstrated in 1.2 per cent of all barium meal examinations. The ratio of duodenal diverticulitis to diverticulosis has been estimated as two in ten.

*Carcinoma of Duodenum.*—Ewing's latest Pathology states, "it appears that about 4 per cent of intestinal carcinomas occur in the duodenum. The age of incidence is much later than with other carcinomas, being placed at 56 years by Geiser. Carcinoma following duodenal ulcer has been recorded in ten cases." It thus appears that carcinoma implanted on duodenal ulcer is quite rare. Primary carcinoma of the duodenum is, however, not uncommon.

## DISCUSSION.

*Dr. Robert B. Baldwin, Tampa:*

Dr. Allen's splendid paper has covered the subject so well very little is left for me to discuss. I desire, however, to touch briefly on a condition which is fairly common. Probably all roentgenologists have at one time or another had the unpleasant experience of finding a bulb which did not fill properly, yet the deformities were constant in neither size nor location, so the question of periduodenitis naturally arises.

This condition interests the surgeon because

in our literature). This sign was elicited under circumstances that make me believe it may prove of some value to us. It was found in a number of patients who were clinically duodenal ulcer



the treatment is in his hands. It is of importance to the internist as it explains some of the cases of duodenal syndrome which do not respond to ulcer treatment. In many of these cases, the pain occurs twenty to thirty minutes after eating and continues during the period the duodenum is filled. To the roentgenologist it is of marked importance and requires careful study, as it may serve to prevent unnecessary surgery.

It is urged that doubtful cases be re-examined one or more times before a laparotomy is done.

*Dr. O. O. Feaster, St. Petersburg:*

In considering this area I think that a very thorough X-ray study of the entire gastro-intestinal tract is essential. So often we see patients on whom clinical diagnoses of peptic ulcer have been made that fail to show this lesion when X-rayed, but definite evidence is found of trouble in the gall-bladder or appendix. Some time ago I studied a patient with a definite clinical history of peptic ulcer of twenty years' duration without being able to find any evidence of gastro-intestinal pathology, whereupon his surgeon removed some old hemorrhoids with complete recovery.

As to Dr. Allen's new sign, I have been impressed with the number of patients who seem to be tender in the epigastrium, so much so that this is the first place I palpate. In the majority of cases the patient feels that you have at once located some of his trouble, with the result that confidence is established and cooperation is assured.

*Dr. F. K. Herpel, West Palm Beach:*

There are many interesting features both in the paper and the discussion which one could talk upon at great length, still leaving the subject uncovered. Nevertheless, we should know a few things that might be stressed briefly without going into too much detail. Dr. Allen's statement that fluoroscopic examination is most important need not be mentioned more than to stress its importance and extreme value as compared with the film examination.

Rupture of an ulcer during roentgen examination is a catastrophe, nevertheless it will occur with any one who has a large practice in gastro-intestinal roentgenology. I have had one in the course of several thousand examinations, in which the major portion of the patients were under par physically. When such an event happens one should be on the alert and act quickly.



Fig. 9—Niche-Type Ulcer Deformity at N.

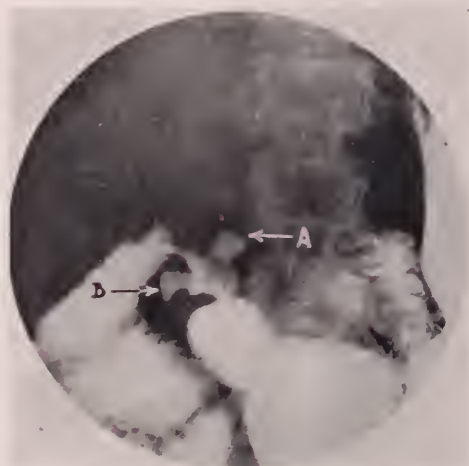


Fig. 10—Chronic Ulcer with Deformity at A & B.

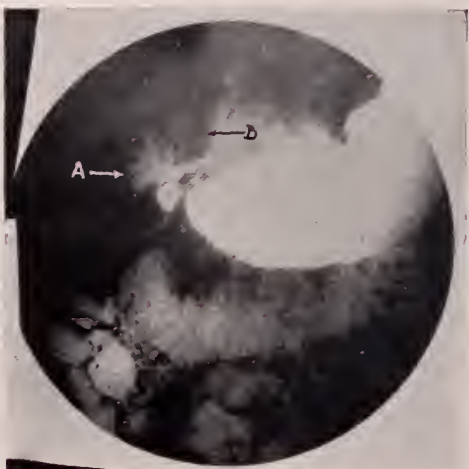


Fig. 11—Chronic Ulcer Producing Obstruction with Adhesions at A and B.

In the patient which I have mentioned, the rupture occurred during screen examination in a man who was up and about his work, in fairly good health, who left his office to have the examination.





Fig. 12—Ulcer at Junction of the Transverse and Descending Duodenum with Adhesions.



Fig. 13—Duodenal Ulcer, Postoperative Observation. Note the marked Peristalsis without Passage of Barium Content.



Fig. 14—Perforated Duodenal Ulcer with Gas Under the Diaphragm Diagnosed Fluoroscopically.

denly perforated, with a passage of the opaque meal through the opening into the abdominal cavity. Operation within two hours resulted in a normal convalescence and recovery. It is interesting to record in connection with this same patient that a few weeks later he was operated upon in emergency for an acute suppurative appendicitis, with an appendix just at the point of rupture.

You receive requests many times about the value of early recheck of the roentgenologic findings, in duodenal and gastric ulcer. I think it is of considerable value to follow up the patient, but you will be surprised in many instances to note practically no change in the roentgenologic findings, while the patient may have made an almost complete symptomatic recovery, with cessation of symptoms.

Local tenderness on palpation is important. I believe that any active duodenal ulcer will have a definite localized point of tenderness on deep palpation, either over the defective area or close thereby. In the ptotic type of patient where you find a point of localized tenderness you are frequently unable to locate a lesion in the duodenum, though a rocking back and forth of the duodenal contents in the second portion is commonly found. On placing the patient on the table with the head lowered you frequently get a normal emptying of the duodenum.

Someone mentioned the use of antispasmodics. I presume all agree that their use is necessary in some cases, in the attempt to get rid of the reflex spasticity from the appendix, hemorrhoids or colonic pathology.

These papers on the duodenum have been most interesting from a roentgenologic standpoint, both Dr. Van Schaick's and Dr. Allen's, and I look forward with pleasure to the following papers discussing the surgical viewpoint.

*Dr. L. W. Cunningham, Jacksonville:*

I would like to stress the fact that a small ulcer on the base of the duodenal cap is hard to find. We spent considerable time two or three days ago finding one. The chap had hemorrhaged several times. We were full of the idea he had an ulcer, but even with the knowledge and with careful study under the fluoroscope in many positions and the use of small films it was difficult to show that ulcer. I feel at times you have seen cases where clinically the gall-bladder is ruled out who have had all the symptoms of

A rather extensive deformity of the duodenum was present, without material pain on deep palpatory pressure over the cap. The ulcer sud-

duodenal ulcer and show no deformity of the duodenal cap, and I believe that some of those are early changes in the duodenum. I have seen a few such cases who later on did show duodenal deformity. Occasionally a chronic appendix, as well as some other conditions, give you symptomatology very much the same as the duodenal ulcer. Again I have noted the frequency with which duodenal ulcer and definite chronic appendix are present, and by chronic appendix I mean one very markedly tender to palpation under the fluoroscope, one you actually see. Personally I think that both the film and the fluoroscope are of distinct value, but the biggest job is to get your duodenal cap to fill in some position where you are not bothered with spine pressure or overlapping of the stomach. Film study comes next. Frequently you may do the biggest part of your work trying to get your cap where you can actually see it.

*Dr. E. M. Hendricks, Ft. Lauderdale:*

The importance of the administration of anti-spasmodics in all roentgenological examinations of the gastro-intestinal tract cannot be too greatly stressed. They should be pushed to the point of full physiological action. The chief enervation of the entire tract is furnished through the coeliac plexus, an unmyelinated plexus, and a hodge-podge in structure when compared with the nice arrangement of the brain and spinal chord. Incoming sensory stimuli are not accurately differentiated, and as a consequence a stimulus from any part may result in a motor response from any or all other divisions of the gastro-intestinal system. I wish to report a case that illustrates this point.

The patient was a young man, acutely ill, and when seen was in shock and almost comatose. He had been vomiting large quantities of blood and complained of severe pain in the upper abdomen, which was boardlike in its rigidity. Fluoroscopic examination failed to disclose any sub-diaphragmatic gas bubble. It was decided to make an exploratory incision under the tentative diagnosis of ruptured peptic ulcer. The stomach, duodenum and gall-bladder were examined and found to be normal. After several enlargements of the original incision, inspecting all viscera encountered, the lower abdomen was reached and a subacute appendix was found with a fibrous band partially obstructing a loop of the small intestine. The vomiting was no doubt reflex,

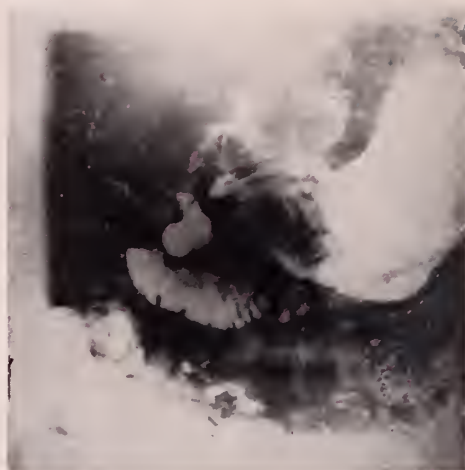


Fig. 15—Diverticulum Descending Duodenum.



Fig. 16—Diverticulum of the Duodenum Retaining Barium 48 Hours.

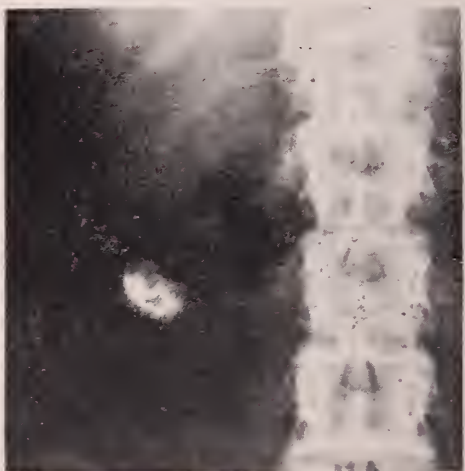


Fig. 17—Diverticulum—Same Case as Figure 16—Retaining Tetraiodo-Phenolphthalein which was Given in Capsules for 72 Hours.

and its violence had ruptured one of the oesophageal varici. This case shows to what an extent one can be misled by symptoms due to aberrant reflex action.



Fig. 18—Carcinoma of the Transverse Duodenum.



Fig. 19—Artist's Reproduction of Post-Mortem Section of Carcinoma of the Transverse Duodenum—Figure 18.

Belladonna or its derivatives straighten out these tangles and it is my rule never to make a positive upper abdominal diagnosis until a careful check-up has been made while the patient is under the influence of one of these drugs.

*Dr. Bundy Allen (closing):*

There is nothing more that I wish to add, unless it might be to emphasize this particular point: I believe that in the examination of a patient it is not advisable to depend entirely on the statement of the patient that the pressure does or does not produce pain. I believe that it is important that we note the amount of resistance met as we make pressure over the suspected area. Relative to making films of the cap, I believe that the most satisfactory way is to make the exposure when the patient is standing behind the fluoroscopic screen.

## GASTRIC HYPERACIDITY: ITS RECOGNITION, CAUSE AND MANAGEMENT\*

MARVIN SMITH, M.D.,

Miami.

"Heartburn" or "sour stomach" is second to the most common gastro-intestinal complaint of modern civilization. It oftentimes mars the peace and tranquility of childhood and early adolescence. In middle life it frequently reduces man's earning capacity and ruins some of his brightest prospects, and in lengthening shadows of old age, it creeps in and adds another burden to the form already bending under the load of increasing years. It is sometimes referred to as a symptom and sometimes as a disease; occasionally it is only the aftermath of a ten-course dinner at a banquet or it may be the outstanding sign of serious pathology. Laymen are quick to give free advice to each other for its relief; druggists prescribe over the counter for it when requested to do so by the sufferer; dentists believe that it is the direct cause of numerous gum and dental conditions and recommend measures for its cure. It attacks everybody at some time or other, but was never known of itself to destroy life. Hurst was able to prove to his satisfaction that the stomach mucosa is insensible to ordinary tactile, thermal or chemical stimuli; nevertheless, we do know that the stomach as an organ does possess a sensibility of its own. One observer states that the healthy stomach possesses the elements of hunger, appetite, satisfaction and repletion. Carlson confirms the observation of Hurst that the main element in all gastric sensibility is muscular tension.

In health we should not be conscious of the fact that we possess this important hollow viscus in the epigastrium except for the sensations above alluded to.

Gastric hyperacidity or hyperchlorhydria, therefore, is a disturbance of the secretory function of the stomach and may exist either with or without organic disease or it may be a neurosis. Fifty degrees of free HCl is considered excessive acidity. It indicates gastric irritation and may arise from organic disease of the mucosa and hypertrophy of the acid glands or its cause may be located in some other portion of the digestive tract either near or remote from the stomach which is itself diseased. Hunter's series of chronic duodenal ulcers showed that 88% had

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hyperacidity. According to Campbell, only chloride estimations can determine between true hypersecretion and lack of neutralization of the gastric contents.

At times marked degrees of hyperacidity or complete achylia are associated with good health, but this does not imply that, in general, excessive secretion has no clinical significance; then, too, there is a difference in the texture of gastric mucosa and its resistance to irritants, just as one type of skin will blister in surf-bathing and another will not, so also the nervous mechanism of some individuals will respond more sharply to a stimulus in the digestive tract than others do. All the way through our consideration of this gastric condition we should keep constantly reminding ourselves that there is a personal equation that enters into each case and that there are idiosyncracies galore and that they play an active part; what would produce a gastric hyperacidity and carry with it marked discomfort, even severe pain, in the case of a delicate nervous individual might mean not even the slightest distress to the muscular, robust bricklayer. Above all, let us not forget that on account of the divers etiological factors which have to be taken into consideration that it is well-nigh impossible to make any definite, precise, pure classification of any sort of stomach trouble.

*How Shall We Recognize Gastric Hyperacidity?* It surely would not be scientific or safe to rely simply and wholly upon the patient's statement that he has it, although he would probably be correct, in more than fifty per cent of the cases. The late Dr. Mills of St. Louis, an eminent radiologist, gave the medical profession a substantial maxim when he said that "soda and a glass of water sitting by the patient's bed-side was the most reliable sign of duodenal ulcer." Likewise, it may be even more truthfully stated that the person who imbibes this alkali freely usually has hyperacidity. Some observers believe that the only subjective symptom is acid regurgitation. The sex of the patient gives us little or no help—male and female seem to suffer about equally. This trouble is seen most often between the ages of 40 and 60 and usually in red-faced, athletic, broad-chested individuals. No occupation is immune, but those of sedentary habits are probably the most susceptible. Family history, if it reveals dyspepsia running through two or three generations, is worth something. Past history showing neurotic tendencies, over-

eating of common foods or meats, too much salt, pepper, ketchup, vinegar, coffee, tea or citrus fruits or concentrated sweets, foods fried in butter or the drinking of alcoholics or excessive use of tobacco or much worry—any of these would surely be a predisposing if not a direct cause. History of present conditions where the patient complains of heartburn, spitting of sour fluid or occasionally vomiting sour liquids, epigastric distress after meals, water brash and constipation—all of these, I declare, point to gastric hyperacidity.

Achylia-gastrica with slow emptying time and rapid fermentation of starches may deceive us.

Fat fermentation setting free butyric acid and glycerine in the stomach as the fats split up may mislead us.

Stenosis of the pylorus resulting in large gastric retention may betray us, or increased tonus of the duodenum and lessening of the tonus of the pars pylorica may do the same.

Fluoroscopic and Roentgen study of the stomach may reveal gastric or duodenal ulcer, the former of which almost invariably causes hyperacidity and the latter now being considered a common etiological factor in more than 50% of the cases of hyperacidity. Ten years ago we believed that both gastric and duodenal ulcer followed hyperacidity; now we are convinced that as a rule the excessive secretion of acid follows the ulceration. The deep cutting waves of hyperperistalsis points us to excessive acidity.

Finally, the two tests of greatest dependability and the two that should be invariably performed are a fractional extraction and quantitative analysis of the test meal which will show a marked increase in both the free hydrochloric acid and the total acidity. Even in this test there are numerous sources of error which cannot be taken up in detail in this short paper. The impossibility of overcoming these errors has spurred the gastro-intestinal specialist on in a search for something which would give a more positive proof of the true state of the gastric secretions and now the gastric contents extracted from the stomach are being tested out for inorganic and total chlorides which has been generally accepted and will certainly soon be considered the most dependable of all methods. For this meritorious work, great credit is due Bolton & Goodhart, S. Miller and F. B. Smith and others.

*What Is the Cause of Hyperacidity?* I answer, briefly, irritation, either intragastric or extra-

gastric, direct or indirect, which results in hypertrophy of the acid glands or goblet cells in the gastric mucosa, giving an overproduction of acid and a lessening in the amount of regurgitation back into the stomach of alkaline duodenal contents.

The sources of this irritation have been variously classified by numerous observers. The outline described by Ryle seems to be the most complete and I will quote it here with certain minor modifications that have grown out of my own personal experience:

1. Habit hyperacidity—for example, overeating, etc., overwork, irregularity and improper food combinations.

2. Nervous hyperacidity—for example, worry, hypochondriasis, etc.

3. Toxic hyperacidity—for example, alcohol and tobacco, oral sepsis, colon or intestinal intoxication following constipation.

4. Irritative hyperacidity—for example, gastric or duodenal ulcer, gall-bladder infection, ulcerative colitis.

5. Mechanic hyperacidity—for example, surgical modifications of the anatomy of the stomach or duodenum, hour-glass stomach, etc.

It is now becoming quite well established that the tonus of the duodenum in regulating alkaline regurgitation into the stomach and the tonus of the pars pylorica in controlling the fluid efflux from the stomach, make up probably the most essential of all the factors in acidity; then, too, we must not overlook the fact that there is an alkaline secretion of the stomach wall itself.

*How Shall We Manage Gastric Hyperacidity?*  
Every physician in this association has had to answer this question for himself more than once and certainly we have all at times felt the keen sting of disappointment and failure that so frequently has attended the measures used for our patient's relief. Our plan of treatment should be worked out after we have come to a decision as to why the patient has the hyperacidity and this we do by measuring him up to some such standard as I have tried to outline.

If the patient overeats, or has improper food combinations, then in making out his dietary, give specific directions as to proper amounts and combinations; for example, meats and concentrated carbohydrates or sweet milk and stringy vegetables do not combine favorably.

If there is a neurotic element with which to contend, help the patient to avoid worry, anxiety and excitement; employ hydrotherapy; prevent

physical exhaustion and quit tea and coffee, and use a simple sedative for a while if it is needed.

If there is toxic poisoning, clean up the mouth, or gall-bladder or other foci; leave off alcohol and tobacco. Select a smooth, nonirritating cellulose diet for overcoming the constipation without drugs.

If there is ulcer anywhere in the digestive tract, give it appropriate treatment. If the acidity seems to have developed because of previous surgery on the stomach or duodenum, these cases will usually be found to make best response to ulcer diet.

Among the medicaments, calcium carbonate and belladonna are the sheet-anchor, in my experience. Don't use sodium-bicarbonate with the hope of giving a cure.

Finally, there will be a considerable percentage of these cases that will still complain, after you have done all these things; these, I subject to late afternoon gastric drain after the plan of Kantor, using a very small tube and performing this for five or six successive days and then taking an intermission for a few days and repeating the treatment if it seems indicated. I have used this plan on a number of intractable cases with a fair degree of results.

For the past twelve years I have kept reasonably accurate statistical records of my patients and since my practice is exclusively gastro-intestinal I thought it might add a touch of interest to my subject to quote a little data.

I have handled, in my private practice, a total of 4,320 gastro-intestinal cases, giving them laboratory study, including fluoroscopic and X-ray examination and treatment. They showed the following classifications:

- 81% showed constipation.
- 23% showed normal acidity.
- 29% showed chronic appendicitis.
- 15% showed either gastric or duodenal ulcer.
- 3% showed positive Wassermann tests.
- 65% showed hyperacidity.
- 12% showed hypoacidity.
- 2% showed acute appendicitis.
- 9% showed gall-bladder disease.
- 25% showed previous ab. operation.

#### SUMMARY.

1. Gastric hyperacidity is a relative term and is primarily a symptom or sequellae.

2. It is most accurately determined by calculating the acidity and the total chlorides of the stomach contents.

3. Its most common cause is constipation.
4. Its best remedy is diet.

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#### DISCUSSION.

*Dr. W. W. Kirk, Jacksonville:*

I assume that Dr. Smith has used the Rhefuss tube in getting analyses as to acidity and other chemicals and activities in his gastric studies. There is a general tendency throughout our part of the country to use that method less and less, the tendency being for X-ray to replace this method of diagnosis.

I have found that heavy magnesium oxide is a very good substitute for sodium bicarbonate.

*Dr. G. P. Hamner, Tampa:*

I think it may be said that in hyperacidity due to gastritis, there is not much hope of relief until these foci are removed. We can treat the hyperacidity as long as the patient will stand for it, but he doesn't get anything but temporary relief, aside from removing the foci, gall-bladder infections, bad teeth, etc., as Dr. Smith has brought out as a primary factor in treating these cases; and he made one point that in my experience has been a very fortunate one. That is the cutting down the amount of food taken at a time. I have often gotten wonderful results in these cases in getting patients to take five small meals a day instead of three heavy meals; in some of these cases we get wonderful results and in others we got no results at all.

Ewald of Germany devised a large tube for lavage with not only one end and one side opening but with twenty small holes. I am a great believer in gastric lavage. I had a great deal of work along that line with Hemmeter of Baltimore and also used the Hemmeter tube for lavage which is not in the market. I think as a secondary treatment, aside from diet this is one of the best factors in relieving hyperacidity, which is due of course to a chronic irritation of the peptic glands, thus pouring out too much hydr. acid.

We use a tube from three to four times a week; I don't advocate using it every morning.

I have known of patients using it after eating a meal; they would use the tube to get rid of the meal; that is very poor practice. I do not recommend teaching a patient to use the tube on himself. After gastric lavage I use a mild antiseptic to be left in the stomach. The first three or four treatments will show a marked amount of ricktenaceous mucus. I always catch that in a basin to see what the result is. I don't hesitate if there is a small ulcer to use the tube and frequently get wonderful results, and I think that is one of the best treatments, but it is so infrequently used. I believe Friedenwall does not believe in it; on the other hand Hemmeter is a great believer in it.

*Dr. M. Smith (closing):*

The question has been asked, "Why do some men neglect the working out of the gastric chemistry and depend upon the X-ray findings for the diagnosis of stomach trouble?" Answering briefly, it would appear to me that they wish to conserve their own energy or to protect their patients from the nuisance of tubes and test meals or both. As a matter of fact, no X-ray examination of the stomach can furnish any reliable information about its chemistry. We are inclined to associate gastric hyperacidity with hypermotility and subacidity with hypomotility, but for diagnosis this is wholly unreliable. There is little excuse nowadays for a guess-work in the diagnosis of gastro-intestinal disease; however, there are many questions yet to be settled, but we should manifest a spirit of fairness to ourselves and justice to our patients by carrying out standard recognized laboratory routine in order to make dependable deductions. I make it my rule to determine qualitatively and quantitatively the gastric chemistry and also to do the X-ray study on each case.

Answering the question about calcined magnesia, will say that I use it occasionally in combination with calcium carbonate and bismuth subnitrate, but I feel that I have probably had better results in gastric hyperacidity by combining magnesium carbonate with the other two ingredients named. The powdered extract of belladonna may also be added to the prescription containing the neutralizing agents, although my preference is to use the tincture of belladonna half way between meals and at bedtime.

Regarding the number of meals per day, will say that in my experience, there is only an occasional patient that can arrange to eat more than



three meals a day and in the average case I endeavor first of all to try only three bland non-fermenting, nonirritating meals. A hyperacidity stomach needs some rest and must not be over-distended. Where the acidity is extreme with much inflammation, plain albumen water with no other food for a short while will be found very helpful and gratifying to the patient.

A troublesome complication in treating gastric hyperacidity is constipation and it is certainly the most frequent cause although sometimes a result. In this condition a diet that will produce smooth, nonirritating cellulose residue, must be selected. Bran and coarse vegetable tops should not be used, but boiled turnip roots, carrots, squashes, pumpkins, etc., pressed through a collander are most appropriate. Agar-agar (DeShell's) I have found serviceable.

I do not advocate stomach lavage for hyperacidity, but many times I have resorted to a late afternoon gastric drain with a small tube, recommended by Kantor. This clears the stomach of accumulated acid and prepares it to receive the evening meal in a state of lessened acidity and in this way reduces gastric irritation.

I appreciate the liberal discussion this paper has received.

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#### SOME PSYCHOSES IN WHICH THERE MAY BE RECOVERY\*

W. M. BEVIS, M.D.,  
Bartow.

In State and other institutions handling psychiatric cases, almost exclusively, there is from 65 to 85% of patients remaining in hospital under treatment a year after the initial admission. During the second year there is a slight reduction, but seldom is the remainder reduced more than half the second year. Unless improvement is made, mental disorders tend to become chronic earlier than is ordinarily supposed. Very few not making substantial improvement within two years after onset make even an approximate recovery. The result is that nearly all hospitals for mental cases show a net increase each year in their already surprisingly large hospital population. Of course, there are exceptions to this and some have been able to show an annual net decrease, that is, more patients discharged than admitted, but these outstanding examples are in the minority.

The foregoing naturally raises the questions, "Why do we not have a relatively larger number of recoveries in mental disorders? In what types and forms of mental illness and in what physical condition and life cycle of patients having mental disorders may we reasonably expect recovery and what can the average physician do to help?" I do not presume to answer these questions in this brief paper, but present a few facts that may partially answer the same. If in so doing greater interest is stimulated in psychiatric cases, time given to presentation and discussion will not be lost.

In psychoses associated with paresis, arteriosclerosis of cerebral vessels, tabes dorsalis, post-encephalitic and postmeningeal lesions, hemiplegia and psychoses resulting from senile degeneration recovery is rare. These are in reality terminal processes and occasionally there is improvement or apparent arrest in the gradual failing course of these conditions, but such is not expected.

In true epilepsy there is nearly always associated a psychosis which becomes more pronounced as the years go by. Mental deterioration is usually present at the end unless that piling-up series of fits known as "status epilepticus" closes the scene before the latter is reached.

Psychoses associated with idiocy, hydrocephalus, cretinism and other endocrine anomalies offer little hope of recovery. Results under the most favorable circumstances are far from encouraging.

Some psychiatrists contend that there is never recovery in the dementia praecox group, that classification given to mental disorders seen in the young and active period of life. Others equally prominent admit that certain types of this important symptom-complex may recover but other types never. Some there are who have seen recoveries in all types of dementia praecox, unless the original diagnoses were wrong. When recognized early and given appropriate treatment an encouraging number of cases of all types of the dementia praecox group do recover.

The manic depressive psychosis is characterized by rises and falls in the emotional and temperamental personality. In the beginning, there may be depression slight or profound; or elation, exaltation and hyperactivity may be seen at the onset. The symptoms seen in the beginning may continue or very suddenly the picture may change from active maniacal symptoms to those of mute melancholia.

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Since both are so often seen in the same individual, we have come to think of them as different phases of the same disease. Various stresses, strains, worries and any condition that depletes the resistance and nervous reserve of the patient are said to precipitate attacks of this disease, but the same are not believed to be the underlying causes. Often when disturbed metabolism, improper or inharmonious functioning of the ductless glands are corrected and the accumulation in the system of various toxic elements is removed, improvement follows, strongly indicating these as etiological factors. In this form of mental illness the prognosis is almost uniformly favorable. However, the same may recur under conditions similar to those responsible for the initial attack.

Closely associated with manic depressive psychosis is involution melancholia occurring in females after the menopause. This condition is believed to be due to the loss of tone or atrophy of the uterus, ovaries and diminished secretion of some of the ductless glands. Puberty and the menopause are critical periods in the life cycle of the female and at both there is a possibility of a departure from the normal nervous or mental reaction. It usually takes the form of an agitated depression, the delusion of having committed the "unpardonable sin" is usually prominent, the patient feels that life is no longer worth living, and active and persistent suicidal tendencies are in evidence. Unless neglected this mental malady usually yields to institutional treatment and recovery may be confidently expected.

Various types of psychoses believed to result from absorption of pus and other toxic material from infected gums, teeth, diseased tonsils and hidden focal infections have come in for a rightful share of study and consideration during the last few years. The untoward effect of certain deleterious substances from without, absorption of delayed end products of digestion from the lower intestinal tract, lack of vitamins and other food deficiencies also may be added to the list of causes of the toxic psychosis. Pellagra is a typical example of the latter.

The question of toxicity in mental conditions opens up a field so staggering in its proportions that it should be of vital interest to every progressive physician. Many cases classified as dementia praecox, manic depressive psychosis or otherwise are found to be of toxic origin

when a reasonable amount of laboratory, X-ray and other clinical data are obtained. Prospect of recovery in this group is in direct proportion to damage done the nervous system and the body as a whole before the condition is discovered and the cause removed. With early diagnosis and appropriate treatment prognosis in most cases is favorable.

Recovery in mental illness appears to be dependent upon: (1) Early recognition as a psychosis. (2) Correct diagnosis. (3) Appropriate treatment. (4) Proper aftercare. In the first and last mentioned, at least, much depends upon the family physician. Even the layman recognizes a full-blown psychosis, but every physician should be familiar with the primary evidences of a beginning disordered mentality. Long before the patient becomes frankly insane, there are certain symptomatic danger signals that should attract the eye of the observant physician. No time should be lost in consulting a psychiatrist or placing the patient in a suitable institution for treatment. Such a course adds much to the chances of recovery. Careful observation, study and diagnostic technic is the right of every case believed to have an "un-gear'd mind." Even though convinced at first that a given case is dementia praecox or paresis, be slow to make a positive diagnosis until all signs, symptoms and laboratory tests are studied and every other possibility has been exhausted.

A diagnosis having been made should be a challenge to prompt action and daring treatment in behalf of the patient. Each case should have individual attention and every reaction, complaint and peculiarity of the patient should be given ample consideration. Continuous study and observation of the patient may uncover vital information that will assist in a cure.

No patient well on the road to recovery or sufficiently improved to leave the hospital should be allowed to return to a situation or environment that might tend to hinder complete recovery or in which the condition responsible for the initial breakdown might favor a recurrence. Follow-up visits and facilities for proper aftercare and return to the hospital if necessary, should be an integral part of the treatment plan.

One of the most outstanding examples of increase in recoveries in all forms of psychoses, not already chronic or deteriorated, is seen in the work of the New Jersey State Hospital at Trenton, under the direction of Dr. Henry A. Cotton.

By thorough study, scientific diagnosis, original research work and rational treatment, an example that is a real contribution to psychiatry and modern medicine has been given.

In prompt and heroic treatment, restoring so many to mental health and happiness, search for focal infections and other factors that bring about pathological conditions in the brain tissue, has played a prominent part. When causes are found and removed, abnormal brain conditions are corrected and abnormal mental symptoms disappear. A process of detoxication by autogenous vaccines from various forms of streptococci and colon bacilli found in the stomach, intestines or other infected area of the individual patient has proven its worth. Modern surgery and dentistry have been effectively used and physiotherapy, occupational therapy have contributed to the happy results.

We should not countenance the general spirit of pessimism in regard to the problem of the insane. When the profession at large insists upon methods that insure a "square deal" to this great group of misjudged unfortunates, not only will recoveries be multiplied but much insanity will be prevented.

#### DISCUSSION.

*Dr. H. Mason Smith, Tampa:*

Dr. Bevis has so thoroughly covered the subject there is not much left to discuss, except to state that he has presented a true picture of the situation.

On the completion of seven years' service in an institution I obtained the idea that the dementia praecox and other functional psychoses could not get well outside of an institution and a small number only got well in them. Since leaving there and seeing these conditions in their incipency I have learned, however, that if they are recognized early and all sources of toxemia removed and any endocrine imbalance which may be existing, cleared, and that patient placed in a suitable environment to which he can make adjustments, the conditions do not advance in many cases into a real psychosis. Even in the cases that have advanced into a psychosis that have been recognized early, this method of handling them produces recovery and it is not necessary to place them in an asylum.

There is no doubt that Dr. Cotton has been of great service, especially in stimulating interest in looking for hidden sources of toxemia and his

percentage of recoveries may be good, but I feel that he has developed a "fadism" for pulling teeth, as I have seen many patients from whom he had pulled teeth that were perfectly sound and I feel that he has done much of this that is not necessary.

Dr. Bevis's paper is very comprehensive and I enjoyed it.

*Dr. G. H. Benton, Coral Gables:*

It is well, I think, to call attention to the fact that a psychosis is a mental situation accompanying an organic or functional disturbance of an individual, and the symptoms represent largely the individual habitual reaction pattern uninfluenced by stimulation or inhibition of purely intellectual kind, as these functions are in abeyance or destroyed; in abeyance if the malady is functional, and destroyed if it is organic and there has occurred much change or destruction of the cortex.

Psychoses accompanying toxic states represent often similar symptom complexes, but are not always dependent upon permanent changes within the central nervous system. The individual symptomatology is commensurate with the personal habitual reaction type of the individual patient.

Psychoses accompanying toxic and other functional states may be treated to advantage and should be curable or at least alterable provided the mental capacity of the individual is such that he can and will comprehend the nature of the advice and explanation rendered him.

A large number of patients in public institutions and some in private institutions are reacting in a psychotic manner, maintaining their individual symptomatology by virtue of lack of desire to alter their situation. No stimuli having penetrated their perceptions sufficiently active to create a desire to be different, they are following the line of least resistance, hence they continue on year after year in much the same states, quite contented with their environment.

Persistent individual work is required with all these patients often over long periods of time before one can discover any improvement in their psychiatric condition. Occasionally most unexpected and surprising results accrue through incidental circumstances not intended for therapeutic purposes, and thus the psychiatrist must be prepared to take any advantage of such incidents when they occur.



*Dr. W. M. Bevis (closing):*

There is nothing more I would say except this: I hope the time will come when the average practitioner will have a simpler foundation for psychiatry. It is my observation that one reason why the subject is not more thoroughly understood by physicians in general is that much of the literature on the subject is voluminous, rather bulky and is not attractive to read. I hope the day will come when the primary principles of psychiatry will be simplified and placed in the hands of the physician in such form that it will be easily read, easily understood and will be attractive reading. When that happy day comes I believe that the average physician will more thoroughly inform himself on these basic principles of psychiatry and that a greater interest in the subject will be developed. I thank you.

#### A STUDY OF EXTERNAL OTITIS\*

L. C. INGRAM, M.D.,  
Orlando.

The subject of this paper was suggested to me after observing over a period of six years many patients suffering from some inflammation and infection of the external ear canal. The literature is bare of any information on external otitis as but few papers have been prepared on this subject in recent years. Thus, I felt justified in presenting this study and invite your consideration of the issue I wish to make, especially in etiology.

We know there are many patients suffering with some form of this disease and are treated more or less over a number of years. The lack of progress in a solution of a better diagnosis and treatment of these patients is unfortunate. Earlier it was my belief that a hot climate was the determining factor, but as articles were offered discussing contamination of swimming pools and infection of the external ear canal I felt the trouble might be distributed over the country. The observation made suggested to me the possibility of a previous chronic infection of the canal by some of the yeast fungus or a systemic intolerance that prepared the way for the pool infection and in this manner began the study and deductions that I wish to present to this society.

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

#### ANATOMICAL CONSIDERATION.

The cartilagino-membranous canal varies widely in size, shape, structure, curves, etc. This sometimes is a factor in the etiology of the disease. The cartilaginous channel is not complete all around, being united above and at the back by a membranous plate uniting it with the osseous canal. Anteriorly it is slit at right angles by two or three fibrous fissures through which blood and lymph unite the circulation of the cutaneous with the outside of the canal. The skin of the cartilaginous canal is thicker, contains hair and many glands. It is thinner in the osseous portions, contains no hair or oil glands and is thinnest over the drum membrane. The epithelial layer grows from the center of the drum toward the external opening of the canal. These anatomical considerations can guide us in determining the origin and the extension of the disease.

#### SYMPTOMS.

The earlier symptoms of external otitis are deafness, itching, pain and tinnitus. One or a combination of all these are usually complained of by the patient. Itching sometimes is one of the most troublesome and most difficult to relieve. It is also a factor in the production of the more severe diffuse types and abscesses. Itching causes the patient to use various articles in the ear for the purpose of relieving this symptom and in doing so he macerates the dermal surface and allows extension to deeper structures of the various microscopic organisms. The diffuse type with suppuration produces the greatest amount of pain and discomfort for the patient. This extension to the deeper tissues may be by continuity or from a lowered resistance through a biological change of body tissues as in alergia. It may be from lowered resistance by toxin from growth of some fungus. Tinnitus is a frequent symptom in the old dermatitis and eczema forms situated on the drum and in osseous part of the canal. Deafness is the result of the swelling of the canal wall or accumulation of cerumen and mycotic masses.

#### COURSE OF THE DISEASE.

Three factors are to be considered in the origin of most external otitis. First, it may be a dermatitis caused by irritants, as dust, etc., in the canal. Second, it may be acute or chronic eczema the result of body tissue reaction as alergia. Third, it may be one of the yeast infections. It is but seldom that it is a single factor or a single

type but usually the result of a combination of two or even the three causing a disease process in the ear canal. We may have a sensitive patient of the allergic type with a skin reaction getting the infection from some of the microscopic organisms usually found on the skin surface causing a swelling of the skin surface and exfoliation particles of dried skin as a bran. This being mixed with the cerumen of the ear forms a cast or plug. I firmly believe in this climate we have many infected with some of the yeast fungi and from this other complications arise. We find more cases in adults than in children.

The diffuse form is the commoner of the active forms. It usually occurs some time through the summer, mostly between June 1st and November 1st. Many times it follows bathing in lakes, pools or the sea; the history of the case is invariably that he has had other similar attacks or has had itching in the ear canal previous to the attack. Some of the patients have never been in bathing. The acute infection was started usually in these cases from an injury as scratching the canal with some article. The infection finds entrance to the deeper tissues, through the hair follicles and then by the lymph or blood vessels through the fibrous fissures to the structure surrounding the ear. It may be a single furuncle near the opening of the canal or a general cellulitis. The auditory canal is either partly or entirely closed by the swelling and no view can be had of the drum membrane. The auricle may be lifted away from the side of the head as a result of the cellulitis. Sometimes the infection invades the middle ear and even the mastoid and becomes very severe. Most frequently, however, a wrong diagnosis is made and the mastoid opened with disastrous results. This form is often semichronic and lasts for considerable time if not properly treated.

#### THE APPEARANCE OF THE EXTERNAL EAR CANAL.

The chronically affected external canal presents one of three pictures on examination. First, canal wall may be slightly narrowed and covered with dry bran-like scales or with a thin moist coating, gray or yellowish in color that is difficult to remove. Second, may be a dry cracked, weeping surface that causes pain with any manipulation of the ear. Third, may be filled with hard or soft mass that requires irrigation to remove. Usually there is a blending of these different conditions to make up the picture. The diseased process may be just at the opening of

the canal with clear skin back of the isthmus and over the drum or it may be in the reverse position. Any one of these conditions may suggest in a broad way the etiology of the external otitis. If an acute inflammatory process has set in, the canal usually is swollen and any manipulation of the ear, as pulling on the auricle, produces pain. This is one of the cardinal symptoms of external otitis. It is pretty well accepted that heat and moisture have very much to do with the infection and its spread. Reasoning from this premise and from our finding in so many of the cases some form of the mold that in many cases contain mycelia and spores of certain paracytic fungi we can safely say that these organisms are frequent causes of the disease. They cannot always be found in the specimens removed for examination, but this does not prove they are not or have not been present on the skin.

There are authentic reports of some form of *aspergillus fumigatis* remaining in an ear for a period of twenty years. It is my belief that this fungus remains in the ears producing for variable periods irritation as itching and then when conditions are right causes most of the external otitis in our state. Castellani and Chalmers in their book, "The Manual of Tropical Medicine," state that this fungus infection of the ears is quite common in the tropics. More cases are constantly being reported from all parts of the United States as attention is given to microscopical examination of the material removed from the ear canal. Adding water or moisture to the culture as in bathing supplies the other factor to promote their growth and the extension deeper into the tissues and brings about the complications. Castellani claims there is a toxin secreted by the growth of the fungus that macerates and produces an inflammation reaction in the skin. The film and scales cannot be removed by irrigation but must be wiped out, using application with small pieces of cotton, moistened with some medicine. The film rolls up in little balls and exposes a red macerated tender skin. If the pus germs have been added to the infection we have small localized abscesses which may become a general infection of the soft structures around the ear. If the streptococci have gained entrance it may be a general cellulitis with systemic depression. This, the diffuse variety, is the most distressing and is a complication where the former skin infection was posterior to the isthmus. The extension was by hair follicles or glands and

through the transverse openings with lymph or blood vessels to surrounding tissue.

#### TREATMENT.

Treatment resolves itself into two phases. First, that of the original infection. Second, those of the more severe and their complications. Usually the itching is the most annoying of original infection but does not require special treatment more than the remedies used to get rid of the infection. Alcohol, either alone or combined with another remedy, as salicylic acid, is the most universally used. I believe it is much overrated and too generally employed for every phase of the trouble. In many of the cases of eczema, especially acute, the acute dermatitis, alcohol not only does harm but causes much unnecessary pain. These cases require some remedy that is going to lessen irritation. Borofax ointment serves the purpose well. It is in these cases that consideration of diet and environment does much to solve the problem and relieve the trouble. Two per cent solution of salicylic acid in alcohol does work well in some of the more chronic cases. This, I believe, is due in great part to the exfoliative effects, removing at times a complete cast from the canal containing the infection.

The canal is first cleansed by use of small cotton covered applicators soaked in 1% silver nitrate. The canal is then dried and an application of 2% mercurchrome applied and canal again dried. If the canal is not raw and tends to bleed I give the patient a prescription for alcohol or alcohol and salicylic acid to be used in ear canal once a day. The treatments at office are made on two to three-day intervals until healing is well under way which may be one to two weeks. He is then instructed to return at two to three-week intervals for cleansing and treatment of canal. If at first treatment there was considerable mold or coating to be removed from canal and a history of other attacks then I feel that one of the yeast fungi is present and may need prolonged treatment. I am now using potassium iodide in five to fifteen-grain doses in one to two-week courses, as recommended by Chisolm and Sutton of Baltimore. My experience with the use of this remedy is limited and not long enough to make a definite statement but it has been encouraging.

The diffuse form with furuncles invalids the patient and at times will produce alarming symptoms. To relieve the pain we will usually need to

use some of the opiates. I generally use codine and aspirin. Heat usually is of benefit. Hot boric compresses are applied and the canal filled with boric solution if it is not closed by swelling. The abscess will need to be drained and usually a vaccine, beginning with four drops and repeated in three days with an increase of two drops to each dose. This makes a decided change in most of the cases. I have not used autogenous; it should be the better but takes time to prepare. The vaccine I have found to give most uniform success is Van Cott's Combined.

In the cellulitis with streptococcic invasion I use streptococcic serum and have had very gratifying results most times.

The usual method of closing such papers is to present a number of case histories to illustrate different phases of the disease or results of the method of treatment used. I do not believe this will assist to put over my idea concerning external otitis. I believe with time the fungus infections will be considered a greater factor in etiology of external otitis.

#### DISCUSSION.

*Dr. B. F. Hodsdon, Miami:*

I wish to compliment Dr. Ingram on his excellent paper. He has so completely covered the subject that there is little left for me to say. As to the swimming ear, so-called, I have found that water finding its way into the auditory canal regardless of whether it be from a pool, ocean, shower bath, or the homely custom of some families to wash out the ears with soap and water, will in many cases produce or incite a diffuse inflammation of the canal or a furuncle usually just inside the orifice of the canal. As to treatment of furunculosis or diffuse inflammation of the auditory canal, unless I think it should be lanced, a very small applicator with cotton tightly wound is moistened with a 95% solution of phenol followed in a few seconds by a similar strength of alcohol.

The ultraviolet ray is then applied by the Kromyer lamp, with a quartz applicator of the proper size to fit the canal, and in many cases if seen early no further treatment may be necessary.

Dr. L. H. Swartz of New York in speaking of furunculosis of external auditory canal said, "I find that those cases that are not incised do better as a rule than the others. After the furuncles have opened the pus should be removed by gently mopping with cotton wound applicators or



through a suction tube, the canal cleansed with alcohol (on an applicator), and finally a sterile gauze drain inserted.

"The pus should not be washed out, as this seems to spread the furuncles.

"Remember, do not irrigate cases of otitis externa."

*Dr. Rufus J. Pearson, Miami:*

This condition is apt to be passed over lightly by the general practitioner, and in many instances, by the man who is doing special work. It is a most difficult condition to treat satisfactorily; but there are just a few points I would like to mention in the diagnosing and treatment of this condition.

First, I try to determine whether or not there is any involvement of the middle ear, or if it is confined to the external canal only. If I can eliminate a discharge prior to the pain, I feel that I can safely rule out middle ear trouble. Then I ask the patient if chewing is painful; if so, I know that the external canal is involved.

The principle thing, I believe, in treating these conditions, is to keep the canal open as much as possible. This I do by inserting a small wick saturated with a 10% solution of ichthyol in glycerine. This serves two purposes, first to sterilize the skin, and also to keep the canal open to facilitate drainage. Sometimes I bandage up these ears just as if I had dressed a mastoid wound, and keep the dressing wet with a weak solution of cyanide of potassium.

*Dr. L. C. Ingram (closing):*

I agree with Dr. Hodsdon that it makes little difference how the water enters the ear, the irrigation will extend the infection and make matters worse. It looked at one time as if this infection introduced by the water was the original infection, but I believe it is only the lighting up of an old trouble in the ear.

I wish to corroborate the statement made in the discussion concerning opening these abscesses. I do not not open them nearly as often now as formerly. Years ago about all I did for this trouble was to open the abscess and drain, which was very trying for the patient. During the past year I have opened very few of these abscesses. Many times it looks as though they should be opened, but after treatment, locally and the vaccine, the trouble is controlled.

As to the use of ichthyol, I at one time used this remedy in treatment of these cases, but do not at the present time.

## FRACTURES OF THE SPINE\*

EDWARD JELKS, M.D.,  
Jacksonville.

I want to call your attention to the importance of careful physical and X-ray examinations when there has been an injury which may not appear in the beginning to be of a serious nature. The cases selected to illustrate this are three with fracture of the spine. The liability, so far as the Riverside Hospital is concerned, lies in the fact that since none of the three patients lived in Jacksonville, we did not carry out their subsequent treatment. All we could do was to make recommendations as to what should be done.

The first patient was from Miami. She came for examination in December, 1925, with the history that eight weeks previously, while dusting the top of the bookcase, it fell upon the upper part of her back. Immediately there were pains in the back which radiated around both sides of the chest to the midline and also down the back of her legs. She consulted her physician who tried some local remedies without relief. She had not been able since the accident to move her spine freely. Examination showed that all the movements of the thoracic spine were limited, especially flexion. In fact, the whole spine was somewhat stiffened. At the level of the seventh thoracic vertebra there was noted an area of tenderness but no swelling or deformity could be made out. X-ray examination demonstrated a compression fracture of the seventh dorsal vertebra. The patient appeared thoroughly skeptical of our diagnosis. After returning home she had another X-ray made and her doctor told her that she had no fracture but merely a strained back. One year and a half later, however, her husband reported that our opinion, they were convinced at last, was correct, as her symptoms were almost as severe as they had been when we saw her more than a year previously.

The second patient, Mrs. G. M. A., age 45, from Chicago, Ill., came to the hospital March 7, 1927. Six months previously, while hanging a mirror, it fell across the back of her head and caused a very large lump of the scalp which disappeared in a few days. The neck was slightly stiff from the date of injury. Her physician told her there was merely a strain to some of the soft tissues of the neck. No X-ray examination was

\*Hospital liability report, presented at the regular monthly meeting of the Staff of Riverside Hospital, Jacksonville, Florida.

made. The pain in the neck, though not severe, remained all the while. Two months ago, following a "cold in the head," pain appeared throughout the back and shoulders. About three weeks later it localized very definitely to the lower part of the neck and movements of the head became markedly more limited. At the time of our examination the pain appeared whenever she moved her neck, especially after she had held her head in one position for a few minutes. The pain had become so severe that she came from St. Petersburg, where she was spending the winter, to Jacksonville for consultation. Examination showed no trace of the scalp injury which was the most evident trouble at the time of her accident. The neck was not deformed, flexion was normal, extension was limited and slightly painful. Bending to the right was normal, to the left was restricted; rotation she did very carefully. There was no evidence of arthritis in the extremities or back. With the provisional clinical diagnosis of osteo-arthritis of the cervical spine an X-ray was made which showed a fracture of the lower cervical region.

The third patient is Mrs. R. M. C., formerly of Lynchburg, Va., now of Jacksonville, age forty-three, who came to us for examination March 21, 1927. Six months previously she was in an automobile accident, at which time she said her spine was jammed and she sustained a sprain of the sacro-iliac joint. She was in bed in Virginia three and one-half months on account of nervousness and pain in the legs and back. About a week after her accident an examination with portable X-ray machine was made and the patient was told that she had no fracture of the spine. On about the tenth day, with great discomfort, she walked upstairs. Both she and her husband said that she was urged in every way to walk and told that the pain in the back and down the legs was not caused by a fracture, that the X-ray showed the spine normal. She was discharged from the hospital after two weeks but continued to get so much worse at home that she re-entered the hospital in a month and remained there two months longer. There was some gradual improvement but the pain continued to be so intense she sought further medical advice. Examination showed a very evident and marked kyphosis which was located in the region of the upper lumbar spine. There was no apparent lateral deformity. Slight flexion was permitted but no dorsal flexion. The lateral motions were fair and equal. There was no evidence of injury

to the cord. On account of the localized pain and deformity our clinical diagnosis was fracture of the spine. The X-ray examination showed this to be true at the level of the upper lumbar vertebra.

Accidents are occurring with such increasing frequency even among women and children, that it is becoming necessary for us to revise some of our ideas concerning diagnosis in cases of injury. There already is and should be more intense interest in this subject among the profession and the laity at large. What may appear in the beginning only a very minor injury may later prove to be one that results in grave disability. The men especially interested in surgery of the skull and brain have brought clearly to our attention the problems arising from head injuries. We have learned, as a result of their teachings, to consider paramount the question of damage to the brain rather than whether or not the skull is fractured, when a patient has received a blow to the head. Our thought should be just the reverse when we are dealing with injuries of the spine. For everyone recognizes a fracture of the spine when there is present a lesion to the spinal cord as evidenced by paralysis or loss of sphincter control. When, however, neither of these disabilities is present and there is only pain, either local or radiating, the diagnosis of sprain or contusion satisfies a large number of the medical profession and most of the laity. We have found not only is this last statement almost always true but that it is very difficult to convince a patient he has a fracture of the spine unless paralysis of some type is present. I do not think one of the three patients whom we discussed tonight believed that she had a fracture. Their lack of belief, no doubt, was increased because of what they had been told by their first medical attendant.

These fractures without cord symptoms frequently do cause an immense amount of disability which extends over a very long period of time. When they are diagnosed early, however, and prompt treatment carried out convalescence is much shorter and the ultimate result better. It is not within the province of this presentation to discuss treatment or prognosis. The point which we want to stress is that a proper X-ray examination, which means lateral views and competent interpretation, often will establish the diagnosis of fracture of the spine, when at the time of the accident there appeared to be only a trivial injury.

SOME SURGICAL DISEASES OF  
MECKEL'S DIVERTICULUM\*

## A REPORT OF THREE CASES

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Meckel's diverticulum results from incomplete closure of the omphalo mesenteric duct. It is a rare condition. In a series of 10,000 consecutive cases, Balfour found but fifteen examples. McGlannon observed only three cases in 14,000 laparotomies. It is generally considered to be present in about 2% of human beings. Probably this figure is far too high. The vitelline duct, having served its function, usually disappears after the embryo is about five weeks old. If it persists, it may be patent throughout, forming an umbilical anus, or it may be obliterated, except at the umbilical end, forming a mucus polypus of the navel, or it may be obliterated at both ends of the duct but remain open in the middle, forming a cyst, or it may be patent at the intestinal end but closed at the navel end, forming that type with which this paper is concerned.

Meckel's diverticulum is found three times more frequently in males than in females. Porter gives the average age of occurrence of disorders at 21 years. Wellington found in a series of 59 cases, that the average age was 14 years. They may occur at any age from date of birth. It is usually found in the distal forty centimeters of the ileum. The attachments of both the intestinal and distal ends are variable. The intestinal end most frequently is joined opposite the mesenteric border. The distal end may be attached anywhere within the abdomen. It may be attached near the umbilicus by a remnant of the duct or its vessels. It may be attached to the anterior or posterior abdominal wall or to the mesentery, or it may have no attachment whatever.

The most frequent complications of Meckel's diverticulum are diverticulitis and intestinal obstruction. A continuation of an inflammatory process may lead to abscess formation with consequent perforation and peritonitis. Intestinal obstruction may be caused by various methods. In general the obstruction is produced by abnormal relationship between the bowel and the diverticulum, causing obstruction by kinking, torsion or volvulus of the bowel. In obstruction the symptom complex corresponds to that found

in other cases of intestinal obstruction. The mortality from obstruction by Meckel's diverticulum is high, between 60 and 70% in various groups of cases reported. It is the opinion of most authorities that it has a greater potential danger than the appendix. In cases of inflammation, the physical signs nearly always consist of a tender fullness of lower quadrant. There may be pain, muscular rigidity, fever, vomiting and leucocytoses, thus simulating appendicitis. Fronticelli states that due to less vascularization, there is less pain than in appendicitis. Some have noted an initial pain around the umbilicus, probably due to the attachment of the distal end of the diverticulum to the abdominal wall at this point. Halstead says that at the present time no symptoms or group of symptoms are sufficiently characteristic to permit of a diagnosis of diverticulitis.

The following three cases are from my own practice and are taken up in order of their occurrence.

*Case I.*—Male, Dominican, aged 35, admitted to the hospital March 23, 1923, with symptoms of intestinal obstruction. The patient gave a history of having had similar attacks of abdominal cramps off and on all his life. The present attack started three days prior to admission and instead of improving as on former occasions, it had become worse. During the 24 hours before admission the abdominal cramps had increased in severity and nausea and vomiting had developed. The bowels had not moved but the vomitus contained no fecal matter. Upon admission he was found to have a pulse of 140, temperature 100, a toxic appearance, abdomen distended and tympanitic. Vomiting was frequent and projectile in character, nevertheless free of intestinal contents. Operation performed two hours after admission showed the abdomen filled with distended, discolored loops of intestine. By gently pushing these aside, a collapsed portion of the small intestine was observed. By further pushing aside the distended loops, the cause of the obstruction was discovered as being due to the twisting of the bowel on its long axis at a point where a very small Meckel's diverticulum was attached. The distal end of the diverticulum was attached to the brim of the pelvis by a thin tendinous cord. There was marked congestion and discoloration but the blood supply had not been disturbed long enough to cause injury. The diverticulum was loosened from its distal attachment and clamped close to the ileum and ligated.

\*Read before the Dade County Medical Society, Miami, Fla., Feb. 4, 1928.



It was removed with the cautery and the stump inverted. An enterostomy was done above the point of obstruction and the abdomen closed. The recovery was uneventful. The enterostomy closed spontaneously after three weeks.

*Case 2.*—Y. C., male, age 24, admitted to Lauderdale Memorial Hospital, March 18, 1927, suffering from symptoms resembling intestinal obstruction. However, there had been a bowel movement earlier in the day and gas was passed by rectum. Present symptoms began March 14, having had abdominal cramps with periods of improvement. He had been taking enemas which relieved temporarily the severity of the symptoms. He gave a history of having had attacks of pain similar to this all his life. Five years previously, during one of the attacks, he had been operated on for appendicitis. It was a question at the time of the operation, if the appendix was affected sufficiently to produce the symptoms. At any rate, the attacks continued to recur at frequent intervals after this operation. Physical examination showed moderately distended abdomen, no rigidity, no tenderness, pulse 100, temperature normal. During the night the symptoms became worse. Vomiting first of bile, then fecal matter. Abdomen in the morning was more distended and tender. Operation under ether anesthesia March 19, showed abdomen filled with distended, discolored loops of intestines. An enterostomy was made in one of the loops of intestines that presented in the wound and abdomen closed without further exploration. Patient's reaction was good, all vomiting and symptoms subsided. Ten days later a second operation was performed and about twenty centimeters from the ileocecal junction, a small leaf-like Meckel's diverticulum was found, causing occlusion by kinking of the ileum. The diverticulum was inflamed and had become fastened through adhesions to the posterior abdominal wall. The adhesions were freed and the diverticulum excised. The stump was treated with phenol and alcohol and inverted. The abdomen was closed, not disturbing the fistulous opening. The postoperative reaction was very good and on the fifth day the patient had a normal bowel movement. The skin sutures were removed on the sixth day and both wounds were in excellent condition. Unfortunately, even though this man survived the intestinal obstruction, he died three days later from the shock of hemorrhage following separation during night of wound edges.

*Case 3.*—W. Y., male. Admitted to Lauderdale Memorial Hospital May 25, 1927, with ab-

dominal cramps. For two days prior to admission, he had been suffering with pains in abdomen. He complained of pain in entire lower abdomen. He gave a history of similar previous attacks. A physical examination showed a well-nourished individual, pulse 96, temperature 100, white blood corpuscles 11000, general abdominal tenderness, moderate distention and right lateral rigidity. Diagnosis, acute appendicitis. Operation revealed abdomen filled with distended loops of intestines. The appendix was lifted into the wound and appeared normal. After removing appendix the wound was enlarged and the distal end of the ileum examined for a probable cause of the symptoms. About thirty centimeters from the cecum, a Meckel's diverticulum, about the size of the little finger of a No. 6½ rubber glove, was found. It was in a highly inflamed condition, semigangrenous and was adherent to the mesentery. The ileum distal to the diverticulum was greatly distended and its veins markedly congested. The diverticulum was freed and excised. The stump was inverted by Lambert sutures after treating with phenol and alcohol. The abdomen was closed without drainage. The convalescence was rapid and uneventful.

It was my wish when I decided to report my personal experience with the diseases of Meckel's diverticulum, to show the important role this condition plays as an etiological factor in cases of intestinal obstruction and in other cases of acute abdominal disease. Every case of suspected appendicitis should be operated upon and if the appendix appears normal the distal forty centimeters of the ileum should be examined for an inflammation of a Meckel's diverticulum. In intestinal obstruction a working diagnosis should be established early and the abdomen opened without delay, always bearing in mind that a possible cause of the trouble is a Meckel's diverticulum.

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# PERSONAL OBSERVATION ON CERTAIN CASES OF ASTHENIA IN SOUTHERN FLORIDA\*

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Miami.

In a recent survey of our case records, our attention was drawn to a group of cases of asthenia which we had observed in office practice during the last eighteen months. This group of asthenics were those who showed very little or no definite organic lesion, yet had symptoms of grave metabolic disorders. The common similarity in these cases was a low metabolic rate.

We had noted previously that asthenia was a very common complaint in Southern Florida. Without an analysis of our cases it was our general impression that these patients complained of an aggravation of their symptoms during the hot months of the year. This report is a brief analysis of our case records of asthenics who demonstrated a basal metabolic rate of below minus 10. This figure was chosen, since, by general consent, it represents the lowest limit of normal metabolism.

On tabulating the results of our metabolic studies, we found that we had made in the last eighteen months 385 metabolism tests on 228 patients. Grouping them according to the metabolic rate which they showed on the first examination, we noted the following:

Twenty-six cases or 11% had rates above plus 10. These were cases of definite hyperthyroidism, including several toxic goiters of exophthalmic and adenomatous type.

Ninety-seven cases or 42% had rates between plus 10 and minus 10—the generally accepted limits of normal.

One hundred and five cases or 46% had rates below minus 10. These cases were definitely hypothyroids. The average rate of this group was minus 21%. Yet it is of interest that none of these cases were cretins or definite myxoedemas. None of this group had ever been subjected to thyroidectomy.

A comparison of our figures with those of King<sup>1</sup> is of interest. He reports 36 cases of hypothyroidism in 200 consecutive basal metabolism tests at the Johns Hopkins Hospital. Thus, 18% of his cases and 46% of ours fell in the same group. Moreover, three of his cases in this group were post-thyroidectomies, and presum-

ably had been hyperthyroids before operation. This shows the incidence of hypothyroidism in our series about three times as great as in his. It must not be forgotten, however, that his reports were based on hospital cases, while ours were all ambulatory office patients. Unfortunately no other series of cases on ambulatory patients is obtainable for comparison.

## SEASONAL INCIDENCE.

In tabulating our basal metabolism tests made during the last twelve months, we note that during the months of November through March 33% of the metabolic tests gave results of less than minus 10. During the rest of the year 60% of all metabolism tests made gave results of less than minus 10.

Many patients also state that their symptoms are aggravated by warm weather and relieved during the cool months of the year, or by a trip to a higher and dryer climate. Observations made on the same patients during the winter months, when their symptoms are not noticeable, show, however, that the lowered metabolism persists even though the symptoms of asthenia are no longer manifest.

## ASTHENIA AND HYPOTHYROIDISM.

A further analysis of our 105 cases of hypothyroids showed that 86 had remained under observation long enough to establish a definite diagnosis.

Of these, 49 cases or 57% had no organic lesion of sufficient importance to produce their symptoms. We have designated these as primary hypothyroids. Thirty-seven of these 86 cases or 43% had definite organic disorders, associated with hypothyroidism. A classification of these cases shows the following:

### *Infections: 8 cases*

Chronic cholecystitis .....	2
Chronic tonsilitis and Vincent's infection .....	1
Chronic sinusitis .....	2
Pyelitis .....	1
Pulmonary tuberculosis .....	1
Intestinal parasites .....	1

### *Endocrine disorders and disorders of sex organs:*

13 cases

Fibroid uterus with menorrhagia.....	2
Functional dysmenorrhea .....	2
Polyglandular dyscrasia .....	2
Climacteric .....	1
Pregnancy .....	2
Colloid goiter .....	3
Diabetes .....	1

\*Read before the Florida East Coast Medical Association, November 10, 1927.

*Degenerative processes: 8 cases*

Chronic myocarditis .....	7
Arteriosclerosis .....	1

*Other conditions: 8 cases*

Severe secondary anemia .....	2
Strained ligaments (knee and sacro-iliac) .....	2
Peptic ulcer .....	1
Stricture of ureter .....	1
Sympathectomia .....	2

A number of these cases could be included in the group of primary hypothyroids, but to prevent confusion, we will consider in them the hypothyroid condition as secondary to the organic disorder. These we will not discuss but will limit ourselves to those in the primary group.

Our 49 cases representing 57% of the hypothyroids were all definite cases of asthenia.

Thirty-eight complained of marked fatigue as the most prominent and in some instances the only symptom.

Ten complained of nervousness and tremors.

Eight had rapid heart, dyspnea and precordial pain.

Four complained of headache.

None of these cases showed signs of myxoedema.

#### COMPARISON OF SYMPTOMS OF HYPOTHYROIDISM WITH MYXOEDEMA.

The classical description of myxoedema as given by Ord is quoted by Osler<sup>2</sup> as follows:

"Marked increase in general bulk of the body, a firm, inelastic swelling of the skin which does not pit on pressure; dryness and roughness, which tend with the swelling to obliterate in the face the lines of expression; imperfect nutrition of the hair. Slowness of thought and movement. The gait is heavy and slow."

#### NUTRITION IN HYPOTHYROIDISM.

In our series of 49 cases, there was no marked increase in size of the body. Twenty-two were definitely underweight. In this our findings corroborated those of Higgins<sup>3</sup> who noted 13 in his series of 23 cases below normal weight. Sixteen of our cases were obese, but the obesity was not much different from ordinary obesity. We noted a tendency toward an increased obesity about the hips and thighs. The fat was flabby and the lobules discrete. This imparts a nodular sensation on palpation.

#### SKIN.

The skin was more frequently thin than coarse. Its surface was usually smooth. Often the skin

of the face was unusually fine and soft. This was especially true in the cases of moderate obesity or normal nutrition. In the undernourished the complexion was often "muddy" and sallow with not infrequent acne infections. We saw no cases of eczema. In this our findings differ from some others<sup>4</sup> who have noted a tendency toward a dry scaly skin. In regard to perspiration, our findings were not constant. Most of our patients stated that perspiration was normal, but our observations tended to indicate diminished perspiration. It must be borne in mind, however, that the summer climate in Southern Florida predisposes to excessive perspiration because of a relatively high humidity, even though the temperature rarely exceeds 90 degrees, Fahrenheit.

The hair in most of our cases was normal. There was an occasional obese hypothyroid who showed a thinning of the outer third of the eyebrow.

There was no evidence of retardation of thought or movements. The mental reaction was frequently more rapid than normal and suggested, in some cases, a flight of ideation similar to that found in mild thyro toxicosis.

#### ANALYSIS OF LABORATORY FINDINGS.

The laboratory findings aside from the low basal metabolic rate usually showed a mild secondary anemia, with a moderate leucopenia and relative lymphocytosis. The pulse varied and was often above normal in the malnutrition cases. There was a frequent low blood pressure.

Average hemoglobin was 75%.

Average red count was about 4 million.

Average white count 5,500.

Average lymph count 40%.

Average systolic blood pressure was 117.

Average diastolic blood pressure was 72.

#### Age Incidence.

0-10 years .....	0 cases
11-20 " .....	6 "
21-30 " .....	12 "
31-40 " .....	16 "
41-50 " .....	9 "
over 50 " .....	6 "

Case reports by Higgins,<sup>3</sup> Grigsby<sup>4</sup> and King<sup>1</sup> showed a somewhat greater incidence in their series of patients over 40 years of age. In their articles, they attribute the hypothyroidism to changes incident to the climacteric. Our series would suggest the possibility of some additional factor with less dependence on the secretion of the gonads.



### Sex Incidence.

There were 11 women and 8 men in this series. This gives a ratio of 5:1, with women predominating. This ratio is in accord with the findings of Grigsby,<sup>4</sup> King,<sup>1</sup> Higgins<sup>3</sup> and Lawrence.<sup>5</sup>

### TREATMENT.

These cases of diagnosed hypothyroidism which fell in this group were treated for varying periods of time with thyroid, iodine, iron tonics, anemia diets, heliotherapy, cathartics, insulin, parathormone, ovarian substance, etc. We were not able to outline any routine measures of therapy. Our data here are not as complete as might be desired, since many patients stopped coming to the office as soon as they obtained a certain degree of relief from their symptoms. It was evident, however, that the majority improved more rapidly when small doses of thyroid were administered in combination with whatever other treatment seemed indicated. Nineteen out of 22 in the undernourished group gained an average of five pounds while taking thyroid.

Six out of 11 normally nourished hypothyroids improved, symptomatically, on thyroid or iodine.

Ten out of 16 obese patients lost weight and showed marked symptomatic improvement under thyroid.

In all 35 out of 49 cases were definitely improved under treatment. Only three failures were encountered. These may eventually improve.

The other 11 cases in this series were not under observation long enough to draw any conclusion in regard to the value of the treatment.

In regard to the permanence of improvement after treatment had been discontinued, it is our impression that there is a tendency to relapse. A number of patients have returned, after discontinuing treatment for three to six months, informing us that their symptoms of asthenia were again in evidence. Many of these patients have voluntarily remarked that their asthenia totally disappeared while they were taking thyroid. They usually return to inquire whether it would be desirable to return to the thyroid treatment.

### CONCLUSION.

1. There is a definite syndrome in which asthenia is the most prominent symptom which is associated with a lowered basal metabolic rate.

2. Patients of this type present symptoms which differ from those found in myxoedema.

3. Definite improvement may be expected in these cases if an intelligent general regimen of

therapy is applied while administering small doses of thyroid substance.

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### PYELITIS\*

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*Definition.*—Pyelitis is an inflammation of the kidney pelvis due to microbic infection.

Rayer, in 1840, first described the disease and Reblaub in 1893 reported several cases at the congress of the French surgeons. The term has become so fixed as the word to describe the clinical condition of the mild or nonsurgical forms of pyelonephritis that it does not seem wise to discontinue it. Strictly speaking, every grade of kidney infection represents different degrees of the same process.

*Classification.*—Kretschmer divides pyelitis into the following clinical groups: (1) Defloration pyelitis or the type occurring in newly married women; (2) pyelitis of infancy or childhood; (3) pyelitis of pregnancy; (4) pyelitis following surgical operations; and (5) cases of simple pyelitis. Symptomatically, it is divided into the acute and subacute.

*Etiology.*—Pyelitis is practically always caused by bacterial invasion and multiplication. Traumatism, elimination of certain irritant drugs, such as cantharides, cubeb, urotropin, etc., the alteration of the urine in certain diseases (sugar in diabetes) may cause renal congestion but not septic inflammation. Normally, the kidney can eliminate without harm to itself any variety of organism, the latter being carried to it by the blood current from a focus, the bladder, intestine or from some far distant focus, *e. g.*, infected tonsils. In order to set up infection in the kidney or kidney pelvis, various factors are usually present, *e. g.*, a lowering of resistance as a result of some general cause, such as anemia, overwork, worry, malnutrition or in-

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tercurrent disease. Pyelitis may be found in the course of various infectious diseases. Most commonly found, however, in the production of a pyelitis is obstruction of the urinary tract, which not only lowers the resistance of the kidney pelvis, but affords a favorable culture medium for the growth of various micro-organisms. In about two-thirds of the pregnancies coming to autopsy, the ureters, particularly the right, have been dilated and filled with urine. This is caused by torsion, stretching or kinking of the ureters due to the enlargement and dislocation of the pelvic organs, but not to compression, since the specific gravity of the uterus when pregnant is about equal to that of the intestinal mass. The pressure in the pelvis of the kidney is only 10 mm. of mercury, so that slight causes may stop the flow of the urine in the ureter. Obstruction alone though, in the urethra, bladder, or ureter will not cause suppurative pyelitis, but only a predisposition to it. For example, an aseptic ligation of one ureter leads to compression atrophy of the kidney on the compressed side, whereas septic ligation is followed by suppurative processes. From what has been said, therefore, it is obvious that certain factors are generally present before a pyelitis is set up, viz., lowered resistance, urinary obstruction and pyogenic micro-organisms. The healthy mucous membrane of the urogenital tract ordinarily resists septic infection, but there are exceptions to this rule and at times pyelitis will be set up without any apparent or discoverable cause. The most frequent cause of pyelitis is infection by the bacillus coli communis. Next in importance are the staphylococcus aureus or albus, usually the former, and the streptococcus. Other organisms, such as bacillus of typhoid fever, bacillus proteus, gonococcus, pneumococcus, bacillus mucosis capsulatis, bacillus pyocyaneus, etc., are rather uncommon invaders. It is not uncommon, in fact, quite common, to find cases of infection with tubercle bacilli.

*Methods of Invasion.*—The portals of entry are (1) hematogenous (descending), (2) urogenous (ascending). For a long time it was thought that in practically every case the infection was urogenous (ascending), the organisms traveling upwards from the lower genito-urinary tract either by way of the lumen of the ureter, or ascending from the bladder to the kidney pelvis through the lymphatics connecting these organs along the wall of the ureter (Eisendrath & Schultz). It is practically settled that ascend-

ing infection by way of the lumen of the ureter never occurs unless an almost complete obstruction exists, or unless we are dealing with the rare type of ureter mouth that permits regurgitation upwards of fluids from the bladder to the kidney pelvis. In a normal bladder, there is no reflux of urine from the bladder to the kidney. That this method of infection occurs is not doubted, but of recent years the importance of this method of invasion is considered greatly exaggerated and has given way to the hematogenous theory of invasion. In the vast majority of pyelitis cases, the infection is blood-borne. The chief advocates of this theory are Cabot and Crabtree. According to these authorities, colon bacilli circulate in the blood during the early hours of symptoms due to colon pyelonephritis and can be demonstrated by blood culture. In a limited number of these cases blood infection has been demonstrated to be primary, followed in order by albuminuria, bacilluria and pyuria. The portal of entry of bacillus into the blood stream is not always demonstrable. The intestine, a purulent urethra, or an inflamed bladder, are the commonest sources of bacilli, even in cases where the infection may have taken place along the course of the lumen of the ureter, owing to an incompetent ureterovesical valve or from lymphatic extension. Cabot and Crabtree were able to recover the bacilli from the blood stream, causing them to seriously doubt the occurrence of renal infection without the intervention of the blood stream. A third, but rare portal of entry for pyelitis, is directly from without, as in wounds of the kidney.

*Predisposing Causes.*—Age: Pyelitis may occur at any period of life, although the largest number of cases that come under observation are seen in adults.

Sex: According to Kretschmer's studies, 61 per cent of pyelitis occurs in females and 39 per cent in males. Pyelitis is often more bilateral (about 60% of the cases). In the remaining 40% of the cases, pyelitis is unilateral—the right kidney being more often involved than the left.

*Pathology.*—The changes exhibited by the pelvis of the kidney, the seat of the infection, may be designated as catarrhal, suppurative, hemorrhagic, membranous and gangrenous. The pathological appearance both macro- and microscopically are typical. Most cases show change in the ureter which may vary in its degree of involvement.

*Symptoms and Course.*—The disease may be

acute, and subacute. All are usually preceded by disease in the kidneys or other organs, even though at times they are not discoverable.

*Acute Pyelitis.*—Acute pyelitis usually begins with chills, high fever and sweats. The temperature may reach as high as 105 degrees F. (40.6 degrees C). The type of fever in acute pyelitis is not characteristic. It may be continuous, intermittent, or remittent. The height of the temperature does not depend upon the severity of the case and bears no special relation to the amount of pyuria and bacilluria. The constitutional phenomena usually attendant upon any febrile are present. The tongue is dry, thirst is experienced, and there is hebetude. Nausea and vomiting either alone or combined, severe pallor and marked prostration may develop. The urine contains much pus, many bacteria, heavy albumin ring, and some red blood-cells. Casts are not present in pyelitis, nor do they necessarily occur in pyelonephritis; but their absence does not exclude the possibility of the latter affection. As a rule, pain referable to the kidney is not found. Occasionally, however, the renal region is sensitive and rarely a distinct renal colic may be complained of. If renal sensibility becomes marked, persists, and if the chills and fevers recur, suspicion concerning the formation of a kidney abscess is in order, and the same should be watched for. The urinary symptoms do not exhibit anything characteristic and may be present in any number of affections of the urinary tract. The urinary symptoms are mostly due to an attendant bladder involvement and consist in frequency, burning of urination, painful urination, urgency, difficulty and incontinence of urine. These symptoms may also be present, even though there is no cystitis present. Death sometimes occurs within a short period, from coma, or often with typical uremic convulsions. In other cases, the fever subsides suddenly as if by crisis, or it may become remittent in character; in still others it gradually reaches normal and the patient recovers.

*Chronic Pyelitis.*—It is not uncommon for the acute type to lapse into the chronic form. More frequently, however, the latter form develops insidiously without being preceded by the acute process. It should be remembered that chronic pyelitis may exist over a number of years without a history of fever or urinary disturbance and be diagnosed accidentally on finding pus or bacteria in the urine. More commonly, however, the patients in addition to the physical findings

in the urine have certain urinary symptoms referable to the bladder, *e. g.*, frequency, painful and burning urination, urgency, hesitancy, dribbling, or incontinence of urine. The latter symptoms frequently lead to the diagnosis of cystitis, and very often patients have been subjects to local treatment referable to the bladder over a long period of years without benefit. It is a good rule to subject every patient suffering with urinary symptoms and changes to a ureteral catheterization, unless the vesical origin of the affection is made practically certain by the finding of organic disease in or around the bladder, *e. g.*, prostatic hypertrophy, stricture, gonorrhea, and spinal cord disease. Even in these cases a pyelitis may also be present. The physical findings of the urine are practically the same as described under acute pyelitis. The red-blood cells may be absent. If the drainage of pus from the kidney is hampered by inspissated pus and ureters entirely or partly obstructed, symptoms of acute obstructive pyelitis may be set up. Similarly, if the focus of infection is not located, exacerbation may occur and convert the chronic type of pyelitis into a temporary, acute form.

*Diagnosis.*—The diagnosis of pyelitis as a rule is not very difficult. Even though the diagnosis of pyelitis is made, it is necessary that the patient be subjected to a careful examination, not only of his urine, but also by the use of the cystoscope, ureteral catheter, X-ray, functional test, wax tip bougie, and the pyelogram, in order to exclude the possibility of some organic lesion of the urinary tract being responsible for the pyelitis. Urine examination reveals urine that is cloudy, and shows a marked ring of albumin. Microscopically the cloudiness is due to pus and bacteria. Usually a few red-blood cells and desquamated epithelial cells are found in the urine. By means of the cystoscope and double ureteral catheter examination, not only the condition of the bladder is ascertained, but the sources of the pus, whether from the right side, left side, or both sides, are learned. Lesions such as ureteral stricture and stone, renal calculus, renal tuberculosis, tumor, hydronephrosis must be eliminated. Stricture of the ureter, large hydronephrosis, and renal tumor, could be differentiated by the pyelogram.

Roentgenograms of the entire urinary tract should be made in every case suffering from renal infections. Silent renal calculi are frequently the underlying cause of acute renal infection. It must be remembered that plain X-ray



pictures even with the catheters in place are not sufficient to give an accurate diagnosis in many cases where renal infection persists. Every case that does not readily respond to the local or general treatment should have satisfactory uretero-pyelograms made. Since as high as 20% of renal calculi do not appear in plain roentgenograms, it is imperative to attempt to demonstrate their shadows by contrast to the surrounding opaque medium.

Another important point in the diagnosis of pyelitis is the carrying out of separate or relative functional kidney tests. In pyelitis, the phenolsulphonephthalein output from each kidney is practically normal, both from the point of time of appearance and quantitative output, but in pyelonephritis, especially if it is quite marked and very far advanced, there is a decided reduction in the quantitative phenolsulphonephthalein output. Their differentiation has not only a decided value in differentiating pyelitis from pyelonephritis, clinically speaking, but has a definite prognostic significance in enabling us to predict whether or not treatment is going to prove curative. Because, in the case of almost pure pyelitis, radical cure is often obtained but only rarely so in pyelonephritic types.

*Treatment.*—In cases of acute colon bacillus pyelitis, instrumental or local treatment is ordinarily contra-indicated. Treatment should consist of rest, and careful regimen of diet, forced water by mouth, and hexamethylenamine by mouth in doses of from 7.5 to 10 grains (.4924 to .65 gram) every four hours. Proper attention should be given to the gastro-intestinal tract, and particularly the avoidance of constipation and the use of free catharsis. There may be exceptions to the rule of not using local or instrumental treatment in acute pyelitis. For example, there have been successful cases in relieving the streptococcus septicemias of pregnancy accompanied by high fever and marked prostration by the use of pelvic lavage, with the result of not only relieving the patient of her severe symptoms, but allowing her to go to the termination of a normal pregnancy. The cases of pyelitis of pregnancy seem to have more marked constitutional symptoms than the ordinary cases. Very often acute pyelitis will not respond to this treatment and the case will lapse into the chronic type.

In acute pyelitis, where a high temperature is present without remission during at least eight hour intervals, cystoscopy and ureteral catheter-

ization is indicated at once to effect proper drainage from the renal pelvis. Length of time for allowing catheters to remain in situ will depend upon the individual cases. Mechanical cleansing of the pelvis by lavage with sterile water or weak boric acid solution may be done.

The treatment of subacute or chronic cases of pyelitis may be considered under the following heads: (1) medical treatment, (2) pelvic lavage, (3) vaccine therapy. The latter has been given a thorough trial and has been found wanting in results.

*Medical Treatment.*—The treatment of pyelitis by drugs has but a small place. Various drugs have been recommended, such as the administration of bicarbonate of soda, half to one teaspoonful, well diluted, three times a day. Salol has been recommended by some, but it has very little practical value. The only drug which is used by practically everyone is hexamethylenamine 7.5 to 10 grains (.4924 to .65 gram), well diluted with water every four hours. Its value is doubtful, as Hinman has shown that urotropin has little action at the level of the kidney pelvis. The acidity of the urine should be tested by examination with litmus paper, and if there is definite alkalinity, about ten grains (.65 gram) of  $\text{NaHPO}_4$  should be given every four hours until the urine becomes acid, for the well-known reason that hexamethylenamine has no sure therapeutic value unless it acts in an acid medium. If, for example, in some cases, urotropin causes vesical irritation or the production of hematuria and is contraindicated, benzoic acid should be substituted. From a medical or internal standpoint, however, more important than the drug administration is the drinking of large quantities of water.

*Pelvic Lavage.*—The treatment which is undoubtedly the most effective is pelvic lavage. This method of treatment consists in the catheterization of the ureters on one or both sides, depending upon whether the infection is unilateral or bilateral; then there is made a test of capacity of the kidney pelvis by the introduction of sterile water through the syringe, followed by the introduction of a smaller amount of some medicinal solution, usually from 8 to 10 cc. injected through the catheter into the kidney pelvis. A large number of drugs have been used for this purpose, for example aluminum acetate, the organic silver salt preparations, such as colargol, argyrol, cargentos, silvol, etc. Geraghty uses silver nitrate solution in strengths of from 1 to 5%.

More recently 1% mercurochrome solutions have been used successfully. The two may be used interchangeably. If the precaution is taken to measure the pelvic capacity before the introduction of the solution, pains and kidney colic will often be avoided. Negative urinary findings, both microscopically and culturally, must be repeated a number of times before the case can be considered as cured.

Some authorities advocate the use of the indwelling ureteral catheter for long periods at a time with frequent irrigations of boric acid solution, the catheter remaining as long as ten days at one time. This has been especially recommended in pyelitis of pregnancy and has even been advised for the most acute types. Where this technique is employed the fever promptly subsides and the temperature remains normal as long as the catheter stays in place. The catheter should be changed at intervals because of the tendency for urinary salts to accumulate on it. This is a comparatively recent addition to the treatment of pyelitis and as yet has not been universally adopted in all of the clinics.

Distant foci of infection should be treated coincidentally.

*Treatment During Pregnancy.*—Three methods of treatment: (1) medical treatment and pelvic lavage, (2) emptying the uterus, (3) surgical drainage or removal of kidney. The latter two should be rarely if ever done. The knee chest posture assumed t. i. d. for ten minutes each time and the elevated Sim's posture while in bed are often actually curative. To aid posture in relieving the stagnation of urine a balloon pessary may be placed in the vagina to lift the uterus out of the pelvis.

When pyelitis is unilateral in pregnancy the patient should lie on the opposite side with an ice bag to the affected side. If it is bilateral the Trendelenberg position is very helpful to relieve torsion or kinking.

When to empty the uterus is not easy to determine. One always tries to carry the pregnancy at least until viability of the child is threatened, but interference may be imperative (1) if fever is high and long continued with repeated and severe chills, (2) if the septic or toxemic symptoms become threatening, (3) if both kidneys are involved, (4) if repeated lavage of the kidney pelvis does not procure permanent relief, (5) if the vomiting becomes uncontrollable, (6) if jaundice appears, (7) if nephritis or pyonephrosis appears.

*Operative Treatment.*—It is seldom necessary to incise the kidney. In pyonephrosis operation is indicated. Drainage through an operative incision may cure the case, especially if no stone, ureteral kinking or tuberculosis exists. In the latter cases, especially with the destruction of the kidney substance, nephrectomy may be indicated. Of course, the functional ability of the other kidney must be determined definitely before nephrectomy is performed. Any obstruction to urinary outflow must be corrected, by urethrotomy, prostatectomy, ureteral section and plastic, nephropexy, or cystotomy.

*Summary.*—The prompt cure of pyelitis depends upon an early diagnosis and prompt recognition of the source of infection, with the aid of the laboratory, cystoscope, and X-ray.

Focal infection is the most frequent cause, and is often followed by secondary colon bacillus infection.

In children pyelitis is of frequent occurrence, being due in most cases to a colon bacillus infection and responding best to alkalization of the urine with potassium citrate or sodium bicarbonate.

Calculus recurrence is often due to persistent pyelitis.

Treatment in all acute cases consists of rest, posture that best facilitates drainage, increased fluid intake, and alkalization of the urine.

Chronic cases require elimination of any primary infectious focus, alternating the use of hexamethylenamine and citrate at intervals of 5 to 7 days. Lavage of the kidney pelvis with nitrate of silver and mercurochrome alternately is indicated in persistent cases.

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## CONGENITAL AND ACQUIRED HEART CONDITIONS IN CHILDHOOD

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"Heart disease is now the greatest single cause of death." This statement follows a survey of some years made by the American Heart Association of New York City.

Between the ages of one and four, heart disease causes one-third as many deaths as scarlet fever and one-fourth as many as whooping cough. Between the ages of five and nine, heart disease causes more deaths than any of the so-called children's diseases, except diphtheria. Between the ages of ten and fourteen heart disease causes more deaths than all other children's diseases combined.

Statistics compiled by Dr. William St. Lawrence of New York show that 2% of the city's school children are affected—amounting in number to about 20,000. The same proportion, he feels, would be found throughout the country if investigations were made. It is interesting to note that of the 2,790 deaths in our own profession in 1927, 851 were from heart disease. This leads all others, the next being only 326 from cerebral hemorrhage.

In the recent World War, of the men between 21 and 31 years of age, examined for military service, 1 in every 20, or approximately 200,000, were disqualified because of disease of the heart. Most of these men appeared in perfect health, were unaware of their condition, and a history of their early life revealed little except the diseases of childhood. Such a discovery stimulated research on diagnosis and treatment of heart conditions and knowing the impossibility of replacing an organ once damaged, the importance of prevention was realized.

Heart disease in children is at present divided into three separate groups: 1. Congenital. 2. Acute infectious. 3. Post-infectious.

Congenital abnormalities of the heart and great vessels may be classified in a general way into,

1. Malposition, as dextrocardia.

2. Defects of the septa. This occurs between either auricles, ventricles or both, and to any degree. Records show patent foramen ovale large enough to admit a lead pencil in thirty per cent of cases coming to autopsy. Normally the foramen ovale closes about the tenth day of life. Less common are

3. Persistent ductus arteriosus.

4. Malposition of large vessels.

5. Malformation and defects of valves.

6. Stenosis and atresia of the pulmonary artery.

7. Stenosis and atresia of the aorta.

The above are due to embryonic defects and no doubt are greatly influenced by intrauterine endocarditis.

*Diagnosis.*—These conditions may present any of the usual symptoms depending on their extent. They are easily recognized in a general way, but often the exact nature of the lesion is found only at autopsy.

*Prognosis.*—Is usually unfavorable, though hope should always be maintained.

*Treatment.*—Consists in measures to build up the bodily resistance, thus making infection less probable and hoping nature will repair the defect.

*Acute Infections.*—This type may be the result of any infection such as arthritis, tonsilitis, pleuritis, chorea, scarlet fever, diphtheria, whooping cough, pneumonia, typhoid, gonorrhea, influenza or septicemia. Syphilis, though important, cannot be classed with these. After three years of age, acute rheumatic fever accounts for more heart damage than any other one disease. The great triumvirate of rheumatism, chorea and endocarditis is only too common. Although we do not know definitely the causes of rheumatism, enough evidence is at hand to make us quite certain that we are dealing with a germ disease, an infection which probably enters the system through diseased tonsils, adenoids or decayed teeth.

*Post Infectious.*—In this class are included, aortic insufficiency, mitral insufficiency or mitral stenosis, where the infection has been overcome and the damaged valves repaired with scar tissue. It is early in this stage that careful diagnosis and treatment can do a great deal to prevent further damage.

Diagnosis of any acquired heart condition should be gone about in a very thorough manner. A complete history is most important. Complaints of aches, especially in the legs and arms, of tiredness, disinclination to work and play should not be ignored. The fact that a child has a systolic murmur does not in itself mean organic disease, if there is a negative history of infection and no cardiac enlargement. However, a murmur, plus enlargement, a positive history and the accompanying symptoms justify proper classification of the patient as a "cardiac." It must also



be borne in mind that a child may have rheumatic heart disease without a previous history of arthritis or chorea.

*Pathology.*—Involvement of the endocardium, myocardium and pericardium is directly proportional to the amount and virulence of the circulating toxin. It cannot, however, be determined by symptoms or physical findings, for often in rheumatic fever cardiac destruction is extensive with very little systemic reaction. Transient infections of low grade cause simply a roughening of the endothelium and a cloudy swelling of the muscle fibres. Those more severe leave necrotic areas in the endothelium which cover with fibrin—then connective tissue grows in and finally calcification takes place. The muscle fibres undergo degeneration and fragmentation. The more severe forms include the pericardium and a serous, fibrinous, purulent or adhesive pericarditis results.

*Treatment.*—Routine and symptomatic treatment of the disease should be, of course, carried out during its course. Great care must be exercised in every case where there is any suspicion of heart involvement, not to let the patient leave the bed too soon. The tachycardia following infections is either due to vascular and vasomotor loss of tone or to true myocardial damage. Time only will determine the outcome. Every child with a history of disease suspected of affecting the heart, should have periodic examination for some months. Those definitely showing damage should be given a few weeks of complete inactivity followed by very carefully regulated exercise gradually increasing. As the child gets up and about, frequent rest periods through the day are necessary. Plenty of fresh air, hygienic surroundings, sun baths and light nutritious food are all important factors. Occupational therapy and pleasant recreation should not be forgotten as a means of supporting the morale. Eradication of all possible avenues of infection, such as diseased tonsils and carious teeth, cannot be stressed too much. Medicine, aside from general tonics, seems of little value. Digitalis preparations may be used when indicated.

*Prognosis*—is greatly dependent on the treatment.

*Prevention.*—This is by far the most important factor concerned. One should take every available precaution against diseases which leave their mark of destruction on the heart. Most of the chief offenders in the past years can now be entirely prevented by taking advantage of vaccines and serums.

Doctor Elbert Kaiser, of Rochester, N. Y., in a study of forty-eight thousand school children over a period of five to eight years, shows the incidence of rheumatic fever, growing pains, chorea, carditis and scarlet fever, to be decidedly less in children who have had a tonsillectomy. This seems to be well borne out by statistics from most writers. In any case with a previous history of infection, where occasional joint pains are complained of, or the heart's action appears questionable, it seems best to remove the tonsils as a prophylactic measure, even if they are not noticeably diseased.

The crusade against heart disease has been so recent that statistics are not at hand to show whether it is more or less prevalent than in past years. Consensus of opinion seems to be, however, that its frequency is increasing. At any rate the situation warrants very serious consideration, and cooperation of the entire medical profession will be necessary if we are to get at the roots and exterminate that which so threatens the health of our future men and women.

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### ADENOMYOMAS\*

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I have selected for discussion tonight a tumor, which for the past twenty years has progressively increased the attention of gynecologists because of its relative frequency, and because its diagnosis and treatment are becoming better and better recognized. I refer to the so-called adenomyomas.

This disease is characterized anatomically by the presence of uterine mucosa distributed in one or more parts of the female generative tract, and occasionally in adjacent tissues, such as the omentum, bowel, umbilicus, and lower recti muscles. Clinically, the disease is marked by dysmenorrhoea, menorrhagia, rectal tenesmus at the mensus; and in distinct lesions, focal pain occurring a day or two prior to the onset of the menstrual period.

Adenomyomas have been studied extensively by Sampson, Cullen and others. Sampson's work and description of the reddish-brown cysts found in the ovarian adenomyoma is so complete, and his illustrations so vivid, that one often hears them referred to as the chocolate cysts of Sampson; the chocolate color being due to the inclusion of old menstrual blood. Cullen has succeeded

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in collecting and studying a very remarkable series of cases of this disease, and to date has offered the only acceptable theory as to the formation of uterine adenomyoma. He succeeded in tracing a direct continuation of the gland elements of uterine endometrium into the musculature of the uterus in nearly 100% of his series. It was during my years of association with him that my interest in this type of tumor was aroused.

*Pathology.*—While the gross pathology of this condition is clear and distinct, the final diagnosis rests with the microscope.

The picture is typified by the presence of uterine endometrium in the part involved. One finds islands of tissue containing tubular glands lined by epithelial cells; these glands or the resultant cysts contain blood either fresh or old and are embedded in a cellular stroma exactly like that lining the uterine cavity. The stroma surrounding these glands or cysts, as the case may be, is at times hemorrhagic and there may be wandering cell infiltration with blood pigment deposits.

Very interesting studies were made on the sections of adenomyomas obtained from patients operated upon at various stages of the menstrual cycle. Thus, it was noted that in a case of ovarian adenomyoma operated upon shortly before the onset of the menstrual period, the uterine mucosa in the ovary presented a hypertrophy equal to the premenstrual swelling obtained from the uterine endometrium. Again in a case of pregnancy accompanying a diffuse adenomyoma of the uterus, the same hypertrophy with the associated decidual changes in the stroma were noted. Misplaced endometrial tissue undergoes atrophic changes just exactly as uterine endometrium atrophies following the complete removal of both ovaries. It is evident, therefore, that these tumors are subjected to the same changes and pass through the various stages of the menstrual cycle just as the normal uterus does. The cystic formation is not difficult to explain.

Degenerative changes follow the occlusion of the lumina of the glands. The fresh blood cells originally contained, break down, leaving the blood pigment (hemosiderin) within the cysts. And it is this pigment which is responsible for the well-known chocolate color. So much for the microscopic pathology.

The gross pathology must, of course, be dependent upon the extent of the disease. This

varies from a minute cyst of the ovary or recto-vaginal septum to the complete involvement of the pelvic viscera. There is a great tendency to pronounced fibrous tissue reaction, and not infrequently one finds the pelvic organs, intestines and omentum severely bound to the parietal peritoneum. In the diffuse adenomyoma, there may be no enlargement of the uterus or it may be three to four times its normal size; the enlargement is usually symmetrical. On section either the anterior or posterior wall or both may be much thickened, and cysts of varying size are found scattered in the uterine wall, these cysts if cut across discharge a chocolate gelatinous fluid.

The following are sites at which uterine endometrium has been found: (1) vulva and vagina, (2) recto-vaginal septum, (3) body of uterus (diffuse adenomyoma); (4) uterine horn or fallopian tube, (5) ovary, (6) utero-ovarian, utero-sacral, and infundibulopelvic ligaments, (7) round ligament, (8) sigmoid flexure of colon, (9) appendix, (10) small intestine, (11) omentum, (12) umbilicus, (13) lower recti muscles.

I shall not dwell on a discussion of the various theories advanced as to the presence of heterotopic endometrium. They have to do with either implantation, invasion, metaplasia, transplantation, metastasis, inclusion of uterine endometrium, or embryologically misplaced Mullerian tissue. No one theory explains the various pictures encountered. In diffuse adenomyoma Cullen's invasion theory has been substantiated beyond doubt.

*Symptomatology.*—Dysmenorrhea is by far the most important symptom. Usually nothing remarkable is noticed during the early years of the menstrual life, then there is a progressive dysmenorrhea particularly noticeable preceding or during the first day of the period. Increasing menorrhagia is the next important symptom. It seems that the severity of the dysmenorrhea is proportionate to the menorrhagia. In adenomyoma of the uterus, the usual history is that of a patient who complains of pain and bleeding. The pain has been noticed for a year or two, but is now very pronounced, almost unbearable during the period. The bleeding which at first was rather scant is now profuse and the duration much longer. Other adenomyomatous lesions produce symptoms referable to the areas involved. When the rectovaginal septum is affected the added picture of pain on defecation

is obtained. Ovarian adenomyomata produce excruciating pain, and here we find dysmenorrhea of the greatest severity. When we consider the pathology and physiology, if you please, of this condition it is not difficult to understand the symptomatology; the patient has besides her normal quota of uterine mucosa, areas of this tissue scattered through the uterine walls or adnexa, which are functional, but which owing to their heterotopic distribution have imperfect channels of egress. The swelling incident to the menstrual period is reflected throughout these areas and pain is the expression of that swelling. The added bleeding is due to the larger amount of functional uterine mucosa. In adenomyomas of the rectovaginal septum the nodule is usually posterior to the cervix, and when this is enlarged, pain is experienced on defecation throughout the course of the menstrual swelling. In the advanced pelvic adenomyomas, the masses may be so considerable and the fibrous tissue reaction so marked as to give symptoms of obstruction. With this there is gaseous distention and marked abdominal discomfort.

*Diagnosis.*—The progressive dysmenorrhea and menorrhagia occurring in a patient whose menstrual history is otherwise negative, and the absence of any history of infection either puerperal or gonococcal makes the diagnosis of this condition presumptive. If to this is added the presence of either a symmetrically enlarged uterus anchored in the cul-de-sac, the presence of one or many cysts, or a nodule in the posterior vaginal wall behind the cervix, the diagnosis of adenomyoma is rather certain. This disease must be differentiated from tuberculosis, in which case there is usually fever, cachexia, amenorrhea and fluid in the abdomen. Malignancy of the ovaries may be indistinguishable from adenomyoma. In cancer of the ovaries, one finds stony consistency of the tumor masses and less evidences of inflammatory reaction. Puerperal or gonorrheal infections may sometimes simulate this condition, here the history should give us a clue.

*Treatment.*—At present surgical interference offers the only adequate treatment of this condition. Our experience with X-ray or radium as the primary therapeutic agent has not been very fortunate. These tumors are densely adherent, and radium does not take care of the tremendous fibrous tissue reaction; and in suspicious cases where one is apt to encounter tuberculosis, gonococcal or puerperal infection, radium would not be helpful. In adenomyoma

of the uterus of the diffuse type, hysterectomy is the treatment par excellence. In cases where separate nodules or cysts occur either in the rectovaginal septum, tubes, ovaries, vulva, vagina, umbilicus or abdominal wall, their removal is recommended. One must bear in mind that since these growths are dependent on ovarian activity for their behavior, any tissue-bearing uterine mucosa which may be left behind will recur in the presence of ovarian tissue and secondary operations have often been necessary; hence the importance of complete removal of the tissues affected. Though not advocating radical surgical procedures, conservative surgery in this condition is dangerous, and one is justified in removing the ovaries when the possibility of recurrence is entertained. Fortunately the majority of patients are between the ages of forty and fifty-five years, so that the complete operation is tolerated better and the discomfort incident to premature menopause is much lessened.

Just a word as to the technical difficulties in the removal of adenomyomata. As stated before, the tendency to fibrous reaction is maximal and often a great deal of time has to be spent in separating the adjacent structures such as ureters, bladder, and bowels. In advanced adenomyoma of the rectovaginal septum the obstruction may be so marked as to necessitate a preliminary colostomy before the removal of the growth and pelvic organs. The operation becomes a procedure far more trying than that for carcinoma of the cervix. If all the growth cannot be removed without serious damage to the rectum, it is preferable to leave behind part of the tumor mass and apply radium later.

The end results in operated cases are good. Many women who would otherwise have been doomed to a progressive invalidism are leading active and useful lives many years after surgical interference. The keynote of the situation rests with early diagnosis, and in this case as in malignant conditions, education of the public will do much towards having them seek advice long before considerable involvement has taken place.

*In Conclusion.*—We have a physiological tumor. Consisting of smooth muscle and fibrous bands; including in its body glandular structures of endometrial type, presenting progressive dysmenorrhea and menorrhagia as the outstanding symptoms. The mode of formation still remains a disputed point, the physical findings varying from a small nodule to the complete involvement of the pelvic cavity. The treatment—surgical removal. The prognosis, good in operated cases.



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## INCREASE IN REPRESENTATION IN HOUSE OF DELEGATES OF AMERICAN MEDICAL ASSOCIATION

At the last annual session of the American Medical Association held in Minneapolis, July 11th to 15th, a triennial reapportionment of delegates from constituent state and territorial medical associations was effected.

The reapportionment of delegates was on the basis of one delegate for each 775 members or fraction thereof for all constituent associations having a recorded membership of 775 or more. Each constituent association with smaller membership is entitled to one delegate. At the present time, the Florida Medical Association has 1,140 members. In 1925, there were 645 members. This, indeed, shows a rapid growth and means that our association will be entitled to two delegates in the House of Delegates of the American Medical Association for 1929, 1930 and 1931.

## OUR NEXT SCIENTIFIC PROGRAM

The 1929 meeting of the Florida Medical Association will be held in St. Augustine early in April. The Scientific Program Committee, which consists of Drs. G. H. Edwards, Orlando, chairman; J. D. Love, Jacksonville, and A. M. C. Johnson, Tampa, recently addressed a letter to all members of the Association, requesting that those desirous of a place on the program communicate with one of the members of the Program Committee, giving the title of paper. Some time before the 15th of January, the Committee must have in hand the title of each paper, together with an abstract of the contents which is to be used in the printed programs.

The applicant is also requested to suggest the names of those whom he desires to discuss his paper. The Committee has definitely decided not to section the scientific program for the next annual meeting. They will endeavor to present a well-balanced program and will as nearly as possible have all sections of the state represented.

If you are desirous of a place on the program, do not delay in sending your title to a member of the above committee.

---

## INCREASE IN SIZE OF JOURNAL

With the August issue of the Journal of the Florida Medical Association, eight additional pages of scientific material were added. It is hoped that the Journal can continue to carry more scientific reading matter each month. Much effort is being made to secure from the essayists illustrations for the articles published, for this adds greatly to the interest of any scientific article. During the past few months, the increase of illustrations has been quite noticeable and essayists are urged to furnish electrotypes for illustrations of their articles.

Essayists are also asked to furnish complete bibliographies whenever possible and to prepare these in the manner adopted by the Journal of the American Medical Association. The recently appointed Publication Committee of the Association will make an effort to select papers containing the most scientific information and those prepared with complete bibliographies and illustrations where indicated.

## CAUSES OF SICKNESS AMONG MALES AND FEMALES AT DIFFERENT AGES

That the human female is more often sick than the male, in spite of her longer average duration of life, is one of the apparent anomalies shown by available sickness records for adult persons and by mortality records.

The U. S. Public Health Service recently undertook to inquire a little more closely into this excess of the sickness rate among females, and kept under observation a general population group composed of about 8,000 white persons of all ages and both sexes for a period of nearly two and a half years in a typical small city in the middle eastern section of the United States. Records of the kinds and causes of sickness were collected, with the result that for the first time there is available information relating to sex differences in the incidence of various diseases at different ages in persons composing a general population group. The results of the study have just been published by the U. S. Public Health Service.

It was found that the higher female sickness rate did not hold true for children under 10 years of age. Boy babies and small boys were apparently more subject to infectious diseases and to diseases of the eyes and ears, skin, to colds and other respiratory conditions, and to digestive troubles, than were girls of the same age. But as soon as the adolescent period of life began, the sickness rate of the girls became higher than that of boys and the female rate for practically all diseases was actually higher than that of the males throughout adult life. Women suffer more than men from sickness due to the common types of respiratory diseases, to digestive and nervous disorders, and to diseases and conditions of the kidneys and heart. This in spite of the fact that the death rate among older women is lower than that of older men.

There were some exceptions to this general rule for persons over 10 years of age. One was that the frequency of accidents was greater among males than among females at every age of life. The proverbial greater adventuresomeness of boys was shown by the fact that in the age period 5 to 9 years the frequency of accidents of all kinds among boys was much greater than that among girls of the same age; but in adolescent ages, the sex difference in this cause diminished considerably, although the accident rate of girls never exceeded that of boys.

The findings of this study corroborate the results of other studies on adults at work, which have been conducted by the Public Health Service in cooperation with certain industrial establishments, and are in accordance with the records of absences among school children due to sickness that have been collected over a period of years.

#### ANNUAL MEETING OF AMERICAN COLLEGE OF SURGEONS

The American College of Surgeons will hold the eighteenth Clinical Congress in Boston, October 8-12. Headquarters will be at the Statler Hotel and meetings will be held in the ballroom of the Copley-Plaza Hotel and Symphony Hall. The Hospital Standardization Conference will be held in morning and afternoon sessions in the ballroom of the Copley-Plaza Hotel Monday, Tuesday, Wednesday, and Thursday. An innovation this year will be the commencement of the clinics in the Boston hospitals on Monday afternoon, continuing through the mornings and afternoons of the following four days. Monday evening's program will include an address of welcome by the local chairman, the address of the retiring president, Dr. George David Stewart, New York; the inaugural address of the new president, Dr. Franklin H. Martin, Chicago, and the John B. Murphy oration on surgery by Professor Vittoria Putti of Bologna, Italy. Tuesday, Wednesday and Thursday evenings' sessions will be held in the ballroom of the Copley-Plaza Hotel. At the Wednesday evening meeting the visiting surgeons will be the guests of the Boston Surgical Society at a special meeting when the Bigelow medal is to be awarded. On Friday evening the Annual Convocation of the College will be held in Symphony Hall when the 1928 class of candidates for Fellowship in the College will be received. The fellowship address on this evening will be delivered by Dr. William J. Mayo. The annual meeting of the Governors and Fellows will be held Friday afternoon and will be followed by a symposium on traumatic surgery to be participated in by leaders in industry, labor, indemnity organizations and the medical profession. Ether Day will be celebrated in the Dome Room of the Massachusetts General Hospital on Friday when a bronze bust of William T. A. Morton will be presented to the hospital. It was in this building that ether was first administered for the production of surgical

anaesthesia on October 16, 1846. Several newly completed medical motion pictures produced under the supervision of the American College of Surgeons and approved by it will be shown during the Congress. Reduced fares on the railroads of the United States and Canada have been authorized to those holding a convention certificate so that the total fare for the round trip will be one and one-half the ordinary first-class one-way fare. Other outstanding features will be the exhibits. In addition to the commercial exhibits the departments of the College will present scientific exhibits. A number of distinguished foreign guests of international reputation have signified their intention of attending. The chairman of the Boston Committee on Arrangements is Dr. Frederic J. Cotton.

#### STATE NEWS ITEMS

The Inter-State Post Graduate Medical Association of North America will give a week of post graduate study in Atlanta, October 12th to 19th. The officers of the Association are as follows:

Presidents of Clinics—Dr. William J. Mayo, Rochester, Minn.; Dr. Charles H. Mayo, Rochester, Minn.

President—Dr. Lewellys F. Barker, Baltimore, Md.

President-Elect—Dr. John B. Deaver, Philadelphia, Pa.

Managing-Director—Dr. William B. Peck, Freeport, Ill.

Executive Secretary and Director of Exhibits—Dr. Edwin Henes, Jr., Milwaukee, Wis.

Treasurer and Director of Foundation Fund—Dr. Henry G. Langworthy, Dubuque, Iowa.

Speaker of the Assembly—Dr. George V. I. Brown, Milwaukee, Wis.

General Chairman, Atlanta Committees—Marion T. Benson, M.D., Medical Arts Bldg.

There are something over a hundred national and international teachers of medicine and surgery on this program. Dr. George Crile of Cleveland makes up the program and Dr. Crile this year has arranged the best program that the Inter-State has put out. This is an intensified post graduate course given to the doctors absolutely free, except for \$5.00 registration fee. The only requirements for a doctor to take advantage of this course is that he be a member, in good standing of his County Society, State Association and A. M. A. Also this is the first time



in the history of the Inter-State it has met below the Mason-Dixon line, or in the southeast.

On Friday and Saturday, October 12 and 13, the local physicians and surgeons of Atlanta will put on two days of clinics to be held at Wesley Memorial Hospital, which will be worth attending. There will be some thirty men on this program. Sunday, October 14th, will be given to rest, worship and seeing Stone Mountain Memorial which is worth while seeing, viewing the marvelous painting of the battle of Atlanta, etc. Promptly at 7:00 o'clock Monday morning, October 15, the Inter-State Assembly opens and continues through Friday night, October 19. On Saturday, October 20, at noon the local doctors will give an old southern barbecue and Saturday afternoon there will be a wonderful football game between Georgia Tech and Notre Dame at Tech Stadium in Atlanta.

\* \* \*

Dr. John S. McEwan of Orlando is in the Orange General Hospital suffering with an axillary abscess following an infection of his left hand a short time ago. He was operated September 11th and is now resting comfortably.

\* \* \*

Dr. Joseph Halton of Sarasota has gone to Norfolk to attend the meeting of the Atlantic Coast Line Surgeons. Following this, he will go to New York to do several weeks' postgraduate work.

\* \* \*

The next meeting of the State Board of Medical Examiners will be held in Marianna November 12th and 13th.

\* \* \*

Dr. W. C. McConnell has recently been made superintendent of the Faith Hospital, St. Petersburg.

\* \* \*

Dr. Hiram Byrd of Tampa announces that he is limiting his practice to affections connected with the nasal (sphenopalatine) ganglia with special attention to hay fever and rhinitis. His office is located in the Citrus Exchange Building, 205 Zack Street.

\* \* \*

Dr. M. M. Moeller of St. Petersburg is spending some time in Europe. He expects to return about October 15th.

\* \* \*

The Sanford General Hospital was opened to the public July 20th.

Dr. R. L. Sullivan of Pensacola recently returned from a trip to Chicago.

\* \* \*

The many friends of Dr. R. D. Furnish of Jacksonville, who recently suffered from a severe attack of typhus fever, will be gratified to know that the Doctor has overcome the infection and is now convalescing.

\* \* \*

Members of the Pasco-Hernando-Citrus County Medical Society recently met at Brooksville, the guests of Dr. W. S. Hancock, Jr. Dinner was served at the Tamiami Cafe after which the business meeting was held in Dr. Hancock's office. The next monthly meeting will be held in Dade City.

\* \* \*

Dr. Jefferson Davis Forster has been spending some time in Detroit doing postgraduate work. He is expected to return to Daytona Beach on or about October 1st.

Dr. I. A. Black, in charge of the eye, ear, nose and throat service of the Government Hospital at Lake City, died suddenly July 27th while making his daily rounds through the hospital. Dr. Black was a native of Alabama and had been in government service for many years. He was recognized as one of the outstanding eye, ear, nose and throat specialists in the service and was highly esteemed by the citizens of Lake City and Columbia county.

The Melbourne Hospital which was opened to the public some seven months ago, recently announced that a maternity ward had been added to the hospital and that it had been equipped by the Pythian Sisters of Melbourne. This institution has grown rapidly and is filling a needed place in its community. It is managed by J. H. Turner, formerly of St. Augustine. The staff is as follows: Dr. I. M. Hay, general surgeon, Melbourne; Dr. I. K. Hicks, eye, ear, nose and throat, Melbourne; Dr. I. F. Bean, internal medicine and X-ray, Melbourne; Dr. W. J. Creel, internal medicine, Eau Gallie; Dr. W. S. Hughlett, Dr. W. C. Page, Cocoa, and Dr. George W. Wood, Rockledge, internal medicine and consulting staff.

\* \* \*

Hope Haven, an institution for crippled children, operated by the Tuberculosis Association of Duval County, recently celebrated its second

anniversary. In a statement issued by the Association headquarters at the St. James Building, Jacksonville, the purpose of the institution is explained as follows:

"Hope Haven was built by the Tuberculosis Association of Duval County, which includes everyone in Duval County who purchases Christmas seals. Definite groups have individually interested themselves constantly to provide comfort and conveniences for the children.

"Hope Haven cares for white children between the ages of 2 and 12, who are pre-tuberculous or crippled from tuberculosis of the bone. The latter disease has been treated with noteworthy success at Hope Haven, where all such cases are under the direction of Dr. F. L. Fort, head of the State Orthopedic Service Department.

"A clinic is held each Wednesday afternoon to examine children for admission, and also for those children who have been dismissed and are ready for periodical examination.

"It is a real joy to watch pale, wan-faced, little children grow rosy and plump with a new light of health in their faces after taking the treatment for a few weeks. Youngsters who come on a stretcher or with bent and twisted bodies often go home in a few months with their bodies much straighter, and with new hope for full recovery, which means so much to them and their parents." \* \* \*

Dr. E. J. Melville of St. Petersburg is spending three months at his Vermont farm at "Melville's Landing" on Lake Champlain. After a month in New York doing postgraduate work, he will resume his practice in St. Petersburg. He is accompanied by his family and Mr. Frank Drean who has been associated with him as technician and electro-therapist for the past three years. They expect to return about October 15.

\* \* \*

Dr. J. R. Chandler of Daytona Beach was recently called to South Carolina on account of the illness of his mother.

\* \* \*

Dr. C. M. Mitchell of Sanford is spending his vacation in Georgia.

\* \* \*

Dr. H. C. Dozier of Ocala, recently spent four weeks in New York City where he did postgraduate work in surgery with special reference to kidney surgery.

(Continued on page 166)



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powder and  $\frac{1}{4}$ -ounce packages. The tablets are put up in tubes of 20 and bottles of 100. The capsules are put up in bottles of 40 and 500.

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Dr. G. H. Withers, formerly of Chicago and later of Sarasota, has recently moved to Miami and announces the opening of offices both in Miami and Miami Beach. He will limit his practice to pediatrics.

\* \* \*

Dr. V. L. Brown, formerly of West Palm Beach, has recently moved to Fort Valley, Georgia.

\* \* \*

Dr. Chas. P. Vincent of Sanford has moved to Laurens, South Carolina, where he will practice in the future.

\* \* \*

Dr. G. C. Tillman and family of Gainesville left August 1st for New England where they will spend their summer vacation. Dr. Tillman expects to attend clinics at New York, Philadelphia and Boston while away. He will return the latter part of September.

\* \* \*

Dr. S. B. Strong, formerly superintendent of the Marcane Hospital, Marcane, Oriente, Cuba, which served as base hospital for the Cuban divisions of the Cuban-Dominicala Sugar Corporation, has resigned his position with that company and opened offices at Prado 98, Havana, Cuba.

The following resolutions were recently adopted by the Broward County Medical Society concerning the death of Dr. Iver C. J. Wiig:

"Whereas, on August 4, 1928, the Broward County Medical Society lost one of its members in the death of Iver C. J. Wiig, and

"Whereas, Dr. Wiig was a loyal member of his profession, conscientious and charitable to the poor, and

"Whereas, his presence will be greatly missed by his profession, associates and fellow members of this Society:

"Be it resolved, That the members of the Broward County Medical Society express their grief in the loss of Dr. Wiig and sympathy for his family. That a copy of these resolutions be spread on the minutes of this Society, one sent to the bereaved family and one to the Journal of the State Medical Association.

"Signed by the Committee, August 14, 1928.

FRANCIS S. SKIFF, M.D.,

LEIGH F. ROBINSON, M.D."

(Continued on page 168)

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The Orange County Medical Society held its monthly meeting at the Orlando Country Club on the evening of August 15th. The guests of the evening were Dr. Frederick J. Waas, president of the Florida Medical Association, Jacksonville; Dr. Shaler Richardson, secretary, treasurer of the Florida Medical Association, and editor of the Journal, Jacksonville, and Dr. Gerry Holden, Jacksonville. Dr. Waas discussed "The Functions of the County Medical Society"; Dr. Richardson talked on "Phases of Ophthalmology Relating to General Practice"; Dr. Holden discussed "The Use of Radium." A buffet supper was served following the scientific program.

\* \* \*

Dr. Lucile Johnson of Miami was married on July 4th to Mr. H. R. Marsh. Mr. Marsh is a graduate of Cumberland University and is practicing law in Miami. Dr. Johnson Marsh will continue in private practice in Miami. Her office is in the Professional Building.

\* \* \*

Dr. Jack Halton of Jacksonville was the guest of Doctors Person and Pruitt of Atlanta on September 4th, where he had been invited to demonstrate at the Rectal Clinic of Emory University the treatment of anal and rectal stricture with carbon dioxide snow as originated by Dr. Jay E. Clemons of Los Angeles, California. The work was done at the Grady Hospital before a number of physicians who are interested in the application of this comparatively new method of treatment.

\* \* \*

A daughter was born to Dr. and Mrs. L. W. Holloway of Jacksonville on August 3rd.

\* \* \*

Dr. H. W. Henry of Ocala has recently moved to New Smyrna where he will continue his practice of medicine, with offices in the State Bank Building.

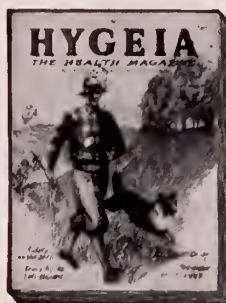
\* \* \*

Dr. R. S. Torbett announces the removal of his offices to 618-619 Citizens Bank Building, Tampa. Practice limited to internal medicine.

\* \* \*

Dr. Geo. E. W. Hardy, Tampa, Major of Medical Corps of 116th Field Artillery, which has been in camp at Camp Jackson, Columbia, South Carolina, has gone to Baltimore where he will review work at Johns Hopkins Hospital.

(Continued on page 170)



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Dr. M. A. Lischkoff of Pensacola recently spent two weeks in Waynesville, North Carolina, with his family who are summering there.

\* \* \*

Dr. N. M. Marr of St. Petersburg is spending his vacation in Pennsylvania.

\* \* \*

Dr. J. D. Love of Jacksonville left August 12th for a trip embracing Cuba, the Canal Zone, California and an overland return through Yellowstone Park and Colorado. He expects to return this month.

\* \* \*

Dr. T. R. Griffin of St. Petersburg has returned from a three months' absence spent doing postgraduate work in the Crile clinics of Cleveland and New York City.

\* \* \*

Dr. W. G. Post of St. Petersburg is spending his vacation in Georgia.

\* \* \*

A daughter was born to Dr. and Mrs. E. W. Bitzer of Tampa on June 6, 1928.

\* \* \*

Drs. H. A. Johnson and G. M. Zeagler have opened a new ten-bed hospital at Palatka Heights to be named the Glendale Hospital. This gives Palatka three good hospitals which should amply take care of the city's needs.

\* \* \*

Dr. Edward H. Cowell of Bradenton is spending his vacation at Lewistown, Pennsylvania.

\* \* \*

Dr. J. M. Anderson of Sears has moved to Rooms 9 and 10, Rhodes Arcade, Lake Wales.

\* \* \*

On August 23, Drs. W. M. Rowlett, Tampa, and Thomas W. Hutson, Miami, were appointed members of the State Board of Medical Examiners for a period of four years each.

\* \* \*

Dr. Chas. E. Duffin recently resigned from the field medical service of the State Board of Health, effective September 1st. Dr. Duffin will locate in Orlando where he will practice his profession.

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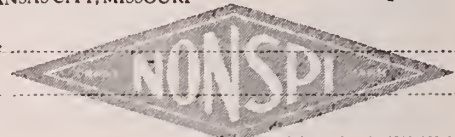
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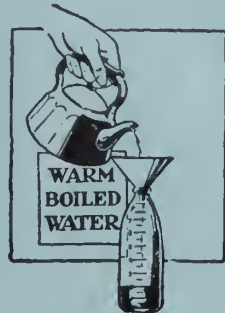


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# THE JOURNAL

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NO. 4

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### CONTENTS

	PAGE		PAGE
Uterine Hemorrhage Without Gross Change in the Pelvic Organs .....	189	Fractures of the Upper and Lower Jaw and Their Correction With the Dental Splint.....	207
<i>Richard M. Klussman, M. D., Ft. Lauderdale.</i>		<i>C. W. Moremen, D. D. S., Local</i>	
The Sinus Question .....	193	Diarrhea Caused by <i>Lamblia Intestinalis</i> —With Report of a Case.....	209
<i>R. E. Repass, M. D., Ft. Lauderdale.</i>		<i>Warren Quillian, M. D., Coral Gables.</i>	
Accidental Injuries to the External Genitals of the Male .....	198	Some Etiological Factors of Dental Caries.....	212
<i>R. B. Harkness, M. D., Lake City.</i>		<i>C. J. Masters, D. D. S., Jacksonville.</i>	
Synergistic Analgesia in Labor.....	200	Editorials: (1) State Health Department Meets the Emergency. (2) Gorgas Memorial.....	214, 215
<i>Franklyn Thorpe, M. D., Tampa.</i>		State News Items.....	215-222
Physiotherapy an Adjunct to Modern Therapy....	204		
<i>Benj. J. Martin, M. D., Miami.</i>			

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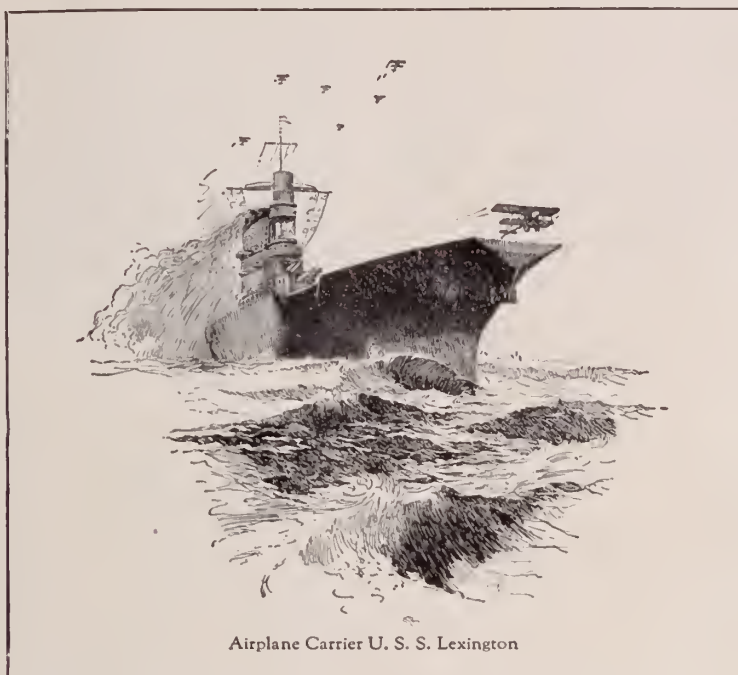
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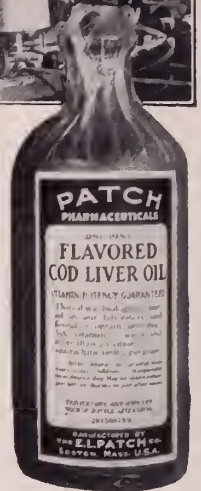
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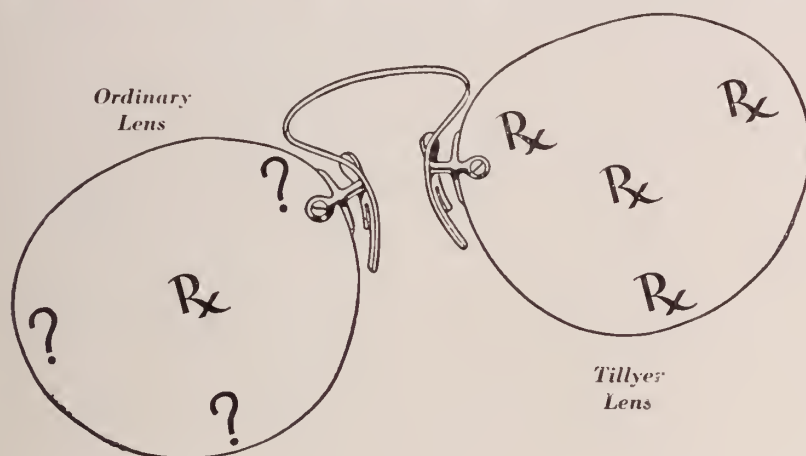
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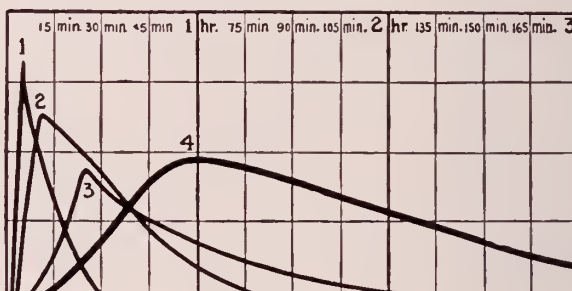
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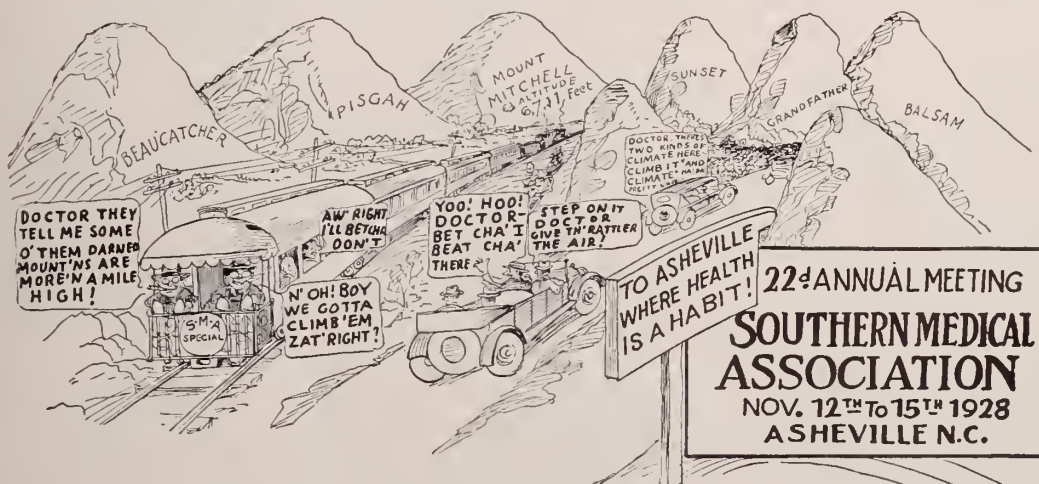
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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

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## UTERINE HEMORRHAGE WITHOUT GROSS CHANGE IN THE PELVIC ORGANS\*

RICHARD M. KLUSSMAN, M.D.,  
Ft. Lauderdale.

Abnormal bleeding from the uterus is, in all probability, the most common of all gynecological symptoms occurring in private practice. It usually occasions alarm in the mind of the patient or the members of her immediate family, and it demands careful examination to determine its origin and effect its control. Cases of moderate or excessive uterine bleeding are frequently seen in which no lesion in the pelvis can be found to account for it. This type of bleeding is spoken of as pathological bleeding in the grossly normal uterus, sometimes called "essential uterine hemorrhage." Such bleeding may occur in any woman at almost any age, but it is most commonly found at and around puberty, between 30 and 40 years of age, and at the menopause.

Uterine bleeding always occurs in the form of a menorrhagia or a metrorrhagia. Menorrhagia is excessive menstruation which may take the form of increased flow at the period, prolongation of the period, or too frequent recurrence of menses, and this may be due to excessive ovarian impulse, to an enlargement of the area in the uterus that responds to this impulse, or to local or general conditions that produce congestion of the blood vessels of the uterus or endometrium. In the final analysis, it is the hypertrophy and glandular hyperplasia of the endometrium which produces the excessive bleeding. Metrorrhagia may be defined as a uterine bleeding occurring in the intermenstrual period, and, as a rule, is evidence of a more advanced pathology, usually malignancy. The coagulability of the menstrual flow is significant, for clots always signify some abnormality and true menorrhagia is always attended by considerable clotting.

Certain constitutional conditions, which increase pelvic congestion, predispose to hemorrhagia. Hence, it is not uncommon to have excessive menstruation as a complication of car-

diac disease, cirrhosis of the liver, chronic nephritis with high blood pressure, blood diseases such as purpura and hemophyilia, acute fevers such as malaria and the exanthemata. Syphilis and disorder of the endocrine system may produce a prolonged or excessive uterine flow. Furthermore, there is the group of uterine bleedings that occur at or after the menopause—called abnormal menopause.

It is of the very greatest importance that every condition should be excluded before a diagnosis of abnormal menopause is made; and it is well to remember that the symptoms of a normal menopause are either sudden cessation of all periods, or increased interval between periods, and a decreased loss during the periods. These symptoms may be associated with others, such as flushings and general nervous disturbances. It is quite true that a great number of cases have irregular bleeding and floodings, but these should be regarded as always due to an abnormal menopause, and should only be diagnosed after curettage and microscopic examinations have been carried out, by which means only, in the present state of our knowledge, can other conditions, and most especially malignant disease, be excluded.

Though it is not thoroughly understood just what part the endocrine system and the individual sex glands play in the woman's sexual life and the development of her generative organs, it is known that she is wholly dependent for her well-being upon their harmonious action, and that there is an intimate relation between the perfect function of these glands of internal secretion and the phenomena of menstruation.

It is the endocrinologist's view that the ovaries are not the only stimulation for the menstrual cycle, but that normal menstruation depends upon a balance of the internal secretion of the pituitary, thyroid, adrenals, and ovaries. Any break in this balance will cause an abnormal stimulus to menstruation resulting in either cessation or increased flow. In support of this statement, certain clinical facts deserve consideration, namely, that when the ovaries are removed there is cessation of menstruation notwithstanding the retention of the uterus; that in

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.



cases of hyperthyroidism, because of the over-activity of the thyroid, amenorrhoea is the rule; while conversely, in cases of deficient thyroid function, there is often an increase in the menstrual bleeding.

Uterine hemorrhage in syphilis is of the menorrhagic type gradually changing to metrorrhagia. It is without gross change in size and shape of the uterus, and is resistant to all local treatment but responds to the general treatment of syphilis. According to Norris there are few authentic cases of syphilis of the uterus; most cases are those of hemorrhage in the presence of a positive Wassermann. However, it must be admitted that in women syphilis is often latent. Hemorrhage in young girls is often due to the latent form of congenital syphilis.

There are various theories as to how syphilis causes uterine hemorrhage. Syphilitic endarteritis of the endometrium is not always a cause of hemorrhage as many uteri show endarteritis with no history of bleeding. Gellhorn suggests that metrorrhagia cannot be explained as the result of syphilis in the uterus and that it is *not* a typical symptom of uterine syphilis. He believes that the ovaries, by overstimulation, are the origin of all uterine hemorrhage except abortions, polyps and carcinoma. Another authority suggests that, in the early stage of the syphilitic ovary, swelling takes place, causing metrorrhagia; later, sclerosis occurs with amenorrhoea. Another thinks that the overstimulation of the ovaries is due to toxins liberated by the spirochetes. Fouguet feels that hemorrhage in syphilitic women is due to *toxic* stimulation of the thyroid, adrenals or pituitary, claiming that spirochetes have never been found in the ovary.

Syphilis by infection of the entire organism produces direct or indirect disturbances in the function, but not in the tissue of the ovary. It is this functional disturbance that causes the uterine hemorrhage. This explanation has a basis since antiluetic treatment promptly cures the uterine hemorrhage in these cases. This would not be so if there were tissue changes in the uterus or ovaries such as arterio-sclerosis or gumma. Gellhorn concludes, as does Stokes, that in uterine hemorrhage without demonstrable cause in the presence of a positive Wassermann it is proper to instigate antiluetic treatment; and that in many such cases a cure promptly ensues.

In these cases of bleeding without gross change in the pelvic organs, we observe clinically

two types of uterus: the small firm uterus and the large relaxed uterus. The small firm uterus is but slightly if any larger than the normal organ and is hard, heavy and regular in outline. It yields little tissue to the curette, but gives a characteristic rasp as the curette passes over the surface. There may or may not be some degree of retroversion. The large, soft uterus is bulky and retroverted and yields a considerable quantity of thickened edematous tissue to the curette. It occurs in parous women and most often as they are approaching the menopause. After curettage the hyperplastic endometrium slowly reforms and the symptoms return. These patients frequently undergo curettage two, three, or more times in the hope that it will tide them past the menopause. It is a condition that is almost certainly cured by exposure to radium. The relative occurrence of the two types is about two of the large to every one of the small.

The diagnosis in these cases depends on a careful history and physical examination to eliminate all remote or general causes. Special examinations should include a blood Wassermann, to eliminate syphilis, blood pressure, to eliminate hypertension, complete blood count, including smear for malaria; also bleeding time and coagulation time to eliminate hemorrhagic diathesis. Of course, the final diagnosis must necessarily depend upon the results of an exploratory curettage, and microscopic examination of the curettings.

In the past, treatment of these cases has been conspicuous by its failure. Cases have been curetted and curetted, have been treated with organotherapy, corpus luteum extract, ovarian extract, thyroid extract, pituitary extract, etc., with the same failure until the menopause or some other operative measure intervened. Total hysterectomy, removal of the ovaries, X-ray of the ovaries, and application of radium are the only reliable methods. Geist claims that excision of cystic portions of the ovaries has resulted in cure in his hands. One intra-uterine application of 50 mgm. of radium for 12 hrs. produces a cure in at least 90 to 95 per cent of the cases.

The intra-uterine method of application is the method of choice, and I have never seen a fistula follow it. In all cases dilatation of the cervix is performed under anesthesia and an exploratory curettage is done, and any tissue removed is referred for microscopic examination. In all cases the radium is screened in brass or lead to

exclude all except the gamma ray, and the tube is secured in rubber tubing 2 to 3 mm. in thickness to exclude secondary rays. The rubber tubing is tied at both ends; the ligature on one end being left long. After placing the tube within the uterus the long ligature is threaded on a needle and passed through the cervix, a hemostat grasping it after it is made taut in order to secure the radium within the uterus. This hemostat is left in place with the vaginal packing until the radium is removed. The vagina is well packed in such a way as to keep the bladder and rectum as far away from the radium as possible, also to aid in keeping the radium in the uterus. The bladder should be catheterized every six hours or a retention catheter used. In an ordinary case the patient is allowed up at the end of three days and home on the 7th day. In cases of advanced anemia the patients are kept in bed for about three weeks.

The dosage for each case must be considered on its own merits. Radium is capable of producing severe burns if not cautiously administered; and such burns even in the uterus, may subsequently declare themselves as a source of infection. In women at or near the menopause 50 mgm. of radium for 12 to 24 hrs. (600 to 1200 mgm. hours) inclosed in 0.5 mm. of silver and 1 mm. of brass, platinum or lead secured in rubber tubing 2.5 mm. thick, is invariably successful. However, when a great deal of blood has been lost and it is urgent to stop the hemorrhage, as much as 100 mgm. may be left in for 36 or even 48 hrs. These doses invariably prove satisfactory and a second treatment is rarely required.

Some of the myopathic hemorrhages in young girls yield to the internal administration of endocrines, and regulation of the lower bowel, but when this and curettage have failed, radium must be resorted to. It must be used with caution and the patient should be told frankly the risk of bringing on an artificial menopause. The average dose used is 50 mgm. of radium for 6 to 12 hours (300 to 600 mgm. hours). In these cases we do not desire to bring on an artificial menopause—but amenorrhoea often occurs for variable lengths of time. Some of these cases subsequently become pregnant.

While radium is in the uterus, the patient may complain of pain which is due to the contraction of the uterus in an effort to expel the radium. Sedatives are occasionally necessary. If vomit-

ing occurs, it is seldom serious and it ceases promptly with the removal of the radium. A reactionary fever may occur but usually subsides in a day or so. As regards to bleeding after the radium treatment, the common history is a prolonged show of 2 to 3 weeks' duration, followed later by a second show, occasionally a third and then amenorrhoea. Where one exposure is going to succeed there is seldom more than this. If hemorrhage persists beyond three months, further treatment will be necessary. Leucorrhoea invariably follows the treatment and in some cases produces irritation. All patients are told to douche themselves with 2 quarts of salt water daily for six weeks. By this time the leucorrhoea has practically disappeared.

The only absolute contraindication to the use of radium in this type of hemorrhage is the presence of pelvic inflammation, and this is a very real danger for such inflammation may become very greatly aggravated. Severe secondary anemia, where the red blood count is reduced by half, is a relative contraindication. In such a case the patient should be kept in bed two to three weeks, on a full diet with injections of iron and arsenic.

When the hemorrhage is serious and the patient over forty, and it matters not whether menopause is induced, 50 mg. are used with 24 hrs. exposure.

In young women, when symptoms are less urgent, and it is undesirable to produce premature menopause, a dose of 25 to 50 mg. is used with 3 to 8 hrs. exposure.

Radium treatment should in all cases be preceded by diagnostic curettage.

In the presence of adnexal lesions radium treatment is contraindicated, for it often aggravates them.

Cessation of bleeding is usually prompt, but occasionally there are one or two free periods following the treatment.

It has been stated that radium treatment with a larger dose and shorter exposure is followed by less abdominal tenderness, also less watery leucorrhoea which is almost always observed for a time.

When a complete and permanent amenorrhoea takes place, only one-third of the patients complain greatly of menopausal symptoms; one-third experience very slight discomfort, and one-third complain of no discomfort whatever.

## SUMMARY.

Uterine hemorrhage without gross change in the pelvic organs may therefore be due to:

(1) General diseases, such as heart, kidney and liver disease, blood diseases, acute fevers, and syphilis;

(2) Myopathic changes as seen in young girls and in abnormal menopause;

(3) Glandular hyperplasia of the endometrium which usually is associated with pelvic congestion;

(4) Functional disturbances of the ovaries or ductless glands.

The most satisfactory treatment is curettage with the intra-uterine application of radium.

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## DISCUSSION.

*Dr. L. W. Cunningham, Jacksonville:*

I will take a few minutes to say we treat satisfactorily the same condition after, of course, the patients have been thoroughly examined and have apparently pathological bleeding. We even treated this class of patients with the old 10-inch machine, so-called, and can much more readily do it with the deep therapy machine. We follow very closely the plan the essayist does with young women. We have seen a number of nurses who had bleeding, apparently without cause after a thorough investigation, and we give those patients what we call a very conservative dose; they may stop menstruating four to six or eight months, start again; probably another treatment will be needed. We use larger doses when they are nearer the menopause. The symptoms of distress of our patients are not usually severe, in some cases not bothered at all; an occa-

sional case may be marked; in those cases ovarian extract may be used.

*Dr. W. M. Rowlett, Tampa:*

It has been brought out in a great many of these obscure cases of uterine hemorrhage the fact of a faulty metabolism. It has been shown that the menstrual fluid contains a very high percentage of calcium salts, and from observations made upon the calcium content of systemic blood, we find that just before menstruation it is very high, but falls rapidly when the bleeding begins. This was also true of a woman who is pregnant and as her pregnancy advances, there is an increased calcium percentage, which falls rapidly when the pregnancy is terminated. In a number of these cases of uterine hemorrhage that have been worked out in the laboratory, where no other pathology could be found, it has been discovered that frequently a low calcium percentage persisted, which shows us without doubt that there is a close alliance between the endocrine system and menstruation and the calcium output and the endocrine system. I was very much interested in Dr. Klussman's paper. I believe it would be advisable in those patients that show much shock, to look for an acidosis and treat it accordingly. In all of these cases I recommend bicarbonate of soda, twenty to thirty grains three times a day.

*Dr. Klussman (closing):*

I do not take up in my paper anything about treatment of the cases by the roentgen ray, because I personally have had no experience with it, but from what I have been able to gather on that subject it is usually very effective in the hands of a good roentgenologist. There is a little danger of over-dosage in the hands of some, but in most cases it is very satisfactory; I think we should keep in mind that it is better to repeat than take the risk of over-dosage; usually give in the neighborhood of 90% of the dose necessary to get a frank irritation of the skin, I believe.

The advantage of radiation treatment I failed to mention and I also failed to mention just how it produced its effect. The advantages, of course, over surgery are: there is no mortality, no mutilation, as a rule, little or no suffering, and very little loss of time.

The method by which the radiation works is by inducing obliterating endarteritis. The reason we feel radium is the method of choice is because we only want to affect the vessels in and



about the growth and not affect the ovaries. Radiation by the roentgen ray is more apt to affect the ovaries. Another thing, it takes a larger dose of radium and a larger dose of roentgen ray therapy to affect the ovaries in younger women; it seems to be easier in women after the menopause to get results by radiation.

### THE SINUS QUESTION\*

R. E. REPASS, M.D.,  
Ft. Lauderdale.

Paranasal sinus disease occupies a position in the field of medicine and surgery today perhaps second to no other local or focal disease. The importance of the subject does not lie wholly in its local manifestations or resultant local complications, but rather as a factor in the production of general systemic disease. It attacks all ages from infancy to old age, prevails in practically all climes and its sundry sequellæ enlist the interest and attention of all branches of specialized medicine.

The past decades have witnessed no more brilliant achievements in the sciences than has medicine and surgery, and the subject of immunology as applied to infectious diseases and preventive medicine stands out as the mariner's beacon to light the way to even greater advancement in the future. The prevention and control of most of our infections and communicable diseases is but a matter of application of well-established methods of immunization and prevention, yet the present status of the common cold, upper and lower respiratory infections, remains or exceeds that of two or three decades ago, claiming its usual quota, incapacitating huge numbers and resulting in the usual mortality rate.

Like tuberculosis the common respiratory diseases have for their ultimate control and possible eradication preventive measures, yet by reason of their universal prevalence, seemingly mild character of onset and our present day demands of business and society, these measures, in the eyes of the laity, seem unwarranted and impractical. Until the medical profession as well as the laity become better converted to the importance of preventing respiratory diseases, little headway will be made toward their control, and illness, disability and loss of life will continue to follow in the wake of this ever-present menace. The inquiry is often made, "Why do we hear so much

of sinus disease in the present day?" and "Is it an actual reality or the doctors' new fad?" To the vast army of victims who are or have been sufferers of this condition, the actuality of its existence is forcibly impressed and the jest of "fad" has in it no sense of humor to them. The question, however, is apropos and one that is occupying the serious consideration of medical men throughout the country. It is possible that until recent times many of these cases were not recognized. Changes in habits and living conditions of the nation are responsible in no small degree.

Predisposing causes:

The trend in recent years from rural to urban life is astounding, so that the latest census reports reveal the fact that the majority of people are now living in cities. Millions of these people are herded together each day in public conveyances, school buildings, motion picture and other amusement halls and millions fed daily in public eating places. Can we expect anything other than a widespread dissemination of these highly infectious respiratory diseases? A generation ago this massing of human beings was scarcely one per cent of present day conditions.

Climate and environment must be recognized as most important predisposing factors. The North Temperate zone that furnishes the widest range and most sudden changes of temperature and degree of humidity, claims the highest percentage of cases. This associated with the dense pollution of the atmosphere with coal smoke, dust and irritating gases, furnishes an ideal environment for the development not only of paranasal sinus disease but lower respiratory complications as well. The question of atmospheric pollution, such as exists in practically all our northern cities today, is one of the country's great menaces to public health and body comfort. Our great industries when seeking a location for industrial expansion take into account the health and death rate of a community, yet at the same time the belching forth of dense clouds of smoke from their factory chimneys, polluting the atmosphere that is so vital to the existence of all, defeats the very advantage they seek to gain by lowering the physical fitness and health of its people and contributing in no little degree to a higher disability and mortality rate. Statistical facts are available to prove that the incidence of pneumonia and the death rate of this disease are greatest in areas that show the greatest degree of

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

air pollution. The question of improper diet, hygiene, bad housing conditions, exposure, fatigue, etc., apply as predisposing factors to this as well as practically all other infectious diseases.

Anatomical deformities that interfere with proper nasal ventilation and breathing, as well as diseased tonsils and adenoids are extremely frequent and important predisposing factors. One is impressed over and over again with the close relationship of obstructive nasal deformities to upper respiratory disease. A good nose is a greater asset to an individual than is generally accredited to it.

The direct causative agent of course is bacterial, whether a direct exposure to a new infection or an activated residual infection. The type and the virulence of the organisms vary to a considerable degree with seasonal changes and stages of the disease. Carmack<sup>1</sup> in a recent bacterial analysis of 100 cases cultured direct from the sinuses at operation, covering a period of four years, found the type of bacteria practically identical for corresponding months and seasons for the four years. While a decided variety of organisms were isolated, only three occurred with reasonable constancy. These were, in order of frequency, staphylococcus, pneumococcus and streptococcus. The principal yearly variance was a decrease of the influenza bacillus and diminished hemolytic effect of other organisms. Pneumococcus increased in frequency during the winter months. The staphylococcus was present in about the same proportion throughout the year and present in practically all cultures of chronic cases. The streptococcus was found in only eight of the chronic cases and in considerably more than half of the acute cases. Streptococcus soon disappears after drainage and aeration is well established.

#### Symptomology:

If only the classical symptoms of sinus disease are looked for and expected, many cases will go undiagnosed and the secondary manifestations elsewhere in the body allowed to progress. This is especially true in young children and in chronic cases of more advanced age. Young children do not complain of localized pain oftentimes and generally do not localize their pain accurately. Neither are they aware of their postnasal discharge or of swallowing large quantities of infectious material. The family physician or pediatrician is first to see and treat them. It may be for an acute abdominal pain simulating appendi-

citis or severe gastrointestinal symptoms of the cholera infantum type, with fever, diarrhea, dehydration and intoxication with sudden loss of weight.

Jeans<sup>2</sup> and Dean<sup>3</sup> have reported a number of such cases with sudden deaths in several instances that seem to follow acute sinus infections exclusively. Dean makes the statement that recurring attacks of vomiting with fever or recurring attacks of fever without vomiting in children is an indication for careful study of the sinuses. It has been my privilege to see a number of young children whose symptoms simulated very closely those of acute appendicitis with pain and tenderness over the abdomen. The existence of an acute upper respiratory infection had not been considered. Brennemann<sup>4</sup> states that during the course of acute upper respiratory infections in children, abdominal pain is a frequent symptom, often the outstanding or only subjective symptom. It usually occurs early in the disease, is commonly intermittent paroxysmal or colicky in character, may be very slight or severe, is accompanied by little or no tenderness, but nearly always referred to the region of the umbilicus or the umbilicus itself. There is another type of abdominal pain very similar to the above but accompanied by marked tenderness, which tenderness may or may not be in the exact location of the pain, and is generally referred to the right lower quadrant. He cites a recent case with exquisite tenderness over McBurney's point, that at operation showed no other pathology than a marked mesenteric lymphadenitis. Freeman<sup>5</sup> and Hutchinson<sup>6</sup> have also emphasized the role of mesenteric lymphadenitis as a cause of abdominal pain in children. Whether the mesenteric lymphadenitis is a result of blood stream infection, or a surface infection, resulting from the swallowing of bacteria, or both, is a problem as yet not satisfactorily explained.

Evans<sup>7</sup> of the University of Wisconsin, in an article on the epidemiology of appendicitis in relation to acute nasal and tonsillar infections, based on the records of 236 cases of acute appendicitis among 16,000 students over a period of six and one-half years, states that the total number of cases of acute appendicitis showed demonstrable primary upper respiratory tract infection in 86% of the cases. He divides this time into eight distinct epidemic periods, covering in all 226 epidemic days. During these epidemic days there were 113 cases of appendi-

citis, as against 113 cases in 1,600 non-epidemic days.

Aldrich<sup>8</sup> reports a series of cases of nephritis secondary to nasal infections, in which the customary systemic treatment did not result in the usual or constant improvement and in which the removal of tonsils and adenoids did not prevent recurrences, and in all, successful drainage of sinus abscesses brought about prompt results.

I have seen marked edema of face and extremities with heavy albuminous urine clear up within a few days after drainage of purulent maxillary sinusitis.

Arbuckle<sup>9</sup> of St. Louis emphasized the importance of the relationship of sinus infections to infectious arthritis and reported four cases of advanced arthritis in which the results from the drainage of suppurating sinuses were phenomenal.

Endocarditis, chorea, pyelitis, prostatitis, in fact, all secondary infectious manifestations should be reason for the closest study of the nasal sinuses as a likely source of infection.

The relation of sinus disease to bronchial asthma is familiar to all, and every case of bronchial asthma should be studied from a standpoint of possible nasal sinus disease.

Jenkins<sup>10</sup> states that 75% of asthma in children will clear up after removal of tonsils and adenoids. My experience in this respect has not been so fortunate. It is also claimed that something like 80% of acute sinus infections in children, apparently, clear up after tonsillectomy and adenoidectomy. As these conditions are known to be so universally associated, it is very important to eliminate this source of infection early.

Mullen<sup>11</sup> states that all the cases of bronchiectasis that have come under his observation have been secondary to chronic sinusitis.

The familiar picture so often seen, usually in the young adult and not infrequently in children, of loss of weight, fatigue, slight rise in temperature, a hacking cough, mental lassitude, delicate appetite, etc., the typical prodromal symptoms of an incipient tuberculosis, though tuberculosis cannot be diagnosed definitely, is often explained by a low grade sinusitis and proper treatment usually is followed by gratifying results.

#### Treatment:

A conservative attitude should always be taken in the treatment of sinus disease where palliative treatment or simple drainage holds out a prospect of relief or cure. This is especially true in the

acute active cases. I have seen acute local sinusitis fired into an acute fulminating general sinusitis by surgical intervention at the wrong time, resulting in imminent danger to the life of the patient.

As a rule children respond very promptly to simple local treatment looking forward to aeration and drainage together with proper hygiene, diet, rest and cod liver oil. Ephedrin 3% solution is widely used at present to instill in the nostrils, replacing to a great extent adrenalin chloride. It has practically the same effect in shrinking the mucous membrane and has the advantage in that its effect is of much longer duration and not followed by secondary engorgement. This followed by some of the commonly used drugs as argyrol, mercurochrome or metaphen accomplishes a great deal in most cases. Where empyema exists or frank suppuration persists after palliative treatment has been tried, then surgical drainage is clearly indicated.

In the chronic types where lining mucosa has undergone ulceration and degeneration with polypoid development and so often local submucous or subperiosteal collections of pus, radical surgery that will eradicate all the diseased tissues possible is the only hope of cure. This applies to any or all of the sinuses involved.

It has been my lot to have treated these conditions for several years at a location where sinusitis is extremely prevalent. Where climatic conditions such as I mentioned elsewhere in my paper prevail, improvement is prompt in most cases and cure apparently established in many, yet many of the apparently cured cases present themselves year after year with recurrences of their local disease and many with recurrences of their complications also. It has been my good fortune also to observe and treat similar cases in Florida and fortunately I have seen cases from practically every state in the Union with all degrees of chronicity and all manner of pathology, cases that have been operated and re-operated, some by the outstanding otolaryngologists of the country and still they suppurate and still they are miserable creatures, especially during the winter months in the north. I have contended and still feel sure that under the influence of abruptly changing climate, from warm to cold, from rain to snow, with extreme variations in humidity, with an atmosphere loaded with noxious gases and coal smoke, with the constant exposure to reinfection in our congested cities, public build-



ings and conveyances, a vast number of these cases will never be cured in such an environment. And you will see young people and people of all ages deteriorate physically and mentally, with bad hearts and kidneys, slow up in their business careers, ambitions blighted, in fact, wreck their future and shorten their lives in spite of all efforts to effect a cure. I know of no physical defect or disease that demands a favorable climate more than chronic disease of the nasal sinuses.

What then have we to offer this class of cases here in Florida?

For generations physicians have realized that patients in poor health improved under sunny skies and the age-old habit of sending people southward obtained long before any scientific explanation could be given for the almost universal improvement that came to those sojourning. It is only in recent years that the sun's spectrum has been seriously and scientifically studied relative to its effect on the health and wellbeing of mankind and today we do not question that in the complex processes of life, ultraviolet energy plays a most important part. Science seems to have proven that ultraviolet energy governs the chemistry of every living vegetable and animal cell. We recognize clinically the marked influence of the sun's rays on the metabolic processes of the body and an attempt to review the literature on the subject of ultraviolet rays would lead one to believe that in this energy we will soon have a panacea for all body ailments. Exaggerated as this statement may be we must admit that in this energy we have a known therapeutic agent, the value of which we cannot at this time estimate. It seems to me that in seeking a place where the forces of nature are most abundantly available the year 'round to those who wish to regain their normal health, Florida offers them these things in greater abundance than any other location in our country. Out of our possible available sunshine hours, we have on an average from 78 to 80%, or 4 hours of sunshine out of every 5 hours of the day. With an atmosphere free of foreign substances to absorb to any degree the ultraviolet energy of the sun's rays, this energy can be had in even greater quantities the year 'round than is necessary for the normal processes of life or those required by altered physical conditions. The extremely equable character of the climate, with a mean temperature last year of 74.4 de-

grees (which is a fair average), makes it an ideal location for all seasons of the year. This, with the opportunities for exercise and recreation in the open throughout the year, sea bathing, etc., leaves little to be desired from the standpoint of climate and sunshine. These climatic advantages, with the proper supervision and scientific care of the chronic sinus sufferer, offer him the opportunity to be restored to health and happiness and add to his span of life which he could not have hoped for in an environment that predisposes to this disease.

In conclusion I want to say that I am a beneficiary of Florida's unprecedented climate, and I have observed the remarkable results of this climate on many others, and when we stop to consider the vast army of sufferers throughout the U. S. A. I feel it is our duty from a humanitarian standpoint to disseminate this knowledge both to the laity and the profession and by so doing make it possible for thousands of these sufferers to regain their health and usefulness to society and assure them that here in the southland there is a hope and future that cannot be had elsewhere.

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#### DISCUSSION.

*Dr. Joseph W. Taylor, Tampa:*

There is a question in my mind if there are more sinus cases today than there were two or three decades back. When I was a child living on a farm where the air was good, I recall the elders in the family and neighborhood hawking and clearing their throats; they had catarrh, so I was told. A little later on when in literary school, I worked in the college doctor's office; he did lots of spraying and used various medicated packs in the nose. In medical school this

treatment was still in force. It has only been in the last few years that we have been on the lookout for sinus disease and to know what to do when we found it. I might add there is still room for improvement in treating these cases. No doubt changeable climate, housing conditions, air pollutions and coming in close contact are great factors. I know a few years ago I never looked especially for sinus trouble unless the nose was filled with polypi or the patient had asthma. Now for the past eight or ten years, on every new case that comes into the office a transillumination is done. A big majority of the cases I find are picked up in this way that otherwise would be overlooked. There is no special subjective symptoms by which a diagnosis can be made. We find all the symptoms of toxic absorption, but they may come from a number of different sources—teeth, tonsils, gall-bladder, etc. However, if you find nasal polypi, you may be sure one or more of the sinuses are involved and most likely the maxillaries.

I would like to add a word in favor of transillumination. When one makes the statement it is valueless or unreliable, he either does not know how to use it or to make the interpretation. I find that it checks in at least ninety per cent of the cases with the X-ray findings and at time of operation.

I would like to take advantage of this opportunity to come to the defense of the ethmoids and sphenoid sinuses; they are badly mistreated. Too many of them are opened up when they are not at fault primarily. If the offender, the maxillary, is cleaned up, the sphenoids and ethmoids will take care of themselves. Let me report two cases to illustrate:

Mrs. C. L. W., age 56, married, came to my office June, 1925, for pain in left eye. Examination: eyes compound astigmatism, no improvement over glasses that she was wearing. Nose right side filled with polypus. Left showed old operation, history of having had four operations on nose. I did an ethmoid exenteration. Two months later nose normal, eyes better. Did not see the patient again until February, 1927. At this time both nostrils were filled with polypi. X-ray showed clouding of all sinuses but more especially of the right maxillary. Bilateral radical maxillary was done, the rest of the sinuses cleared up without further treatment. No recurrence to date.

Mrs. S., age 63, married, two children healthy.

Past history of no importance. Present history: One year ago polypi removed from left side of nose. Breathing good up to two months ago. Now unable to breathe through left side of nose. Examination: Transillumination not so clear for left maxillary. X-ray showed marked involvement of left maxillary, other sinuses clear. Radical maxillary was done. Patient discharged end of two weeks. Returned in two months. I found maxillary dry, no polypi, nose normal, patient feeling much improved.

I think seventy-five per cent or more of the sinus infections are ascending in type. A few years ago I read a paper before this body on a review of one hundred sinus cases; then I reported sixty per cent due to ascending. Since that time I believe the former figures are more nearly correct. Of course, this is for chronic cases; the acute will usually take care of themselves if treated as an acute cold should be, by ventilation to the sinuses, relieving the engorged mucous membrane and using mild germicides. Suction in moderation will help and above all the good sunshine we have in Florida. The chronic cases must be cleared up first, then the equable climate will prevent a recurrence.

Dr. Repass has covered the subject well, and I wish to compliment him on his excellent paper.

*Dr. R. E. Repass (closing):*

I wish to thank the Doctor for his discussion of my paper.

Dr. Taylor remarked that, in his opinion, the sphenoid and ethmoid sinuses were often too much treated. This is probably true. However, I feel that any sinus that is badly diseased, and where there is evidence of this local infection causing serious systemic trouble, it should be drained or taken care of in such a way as to eliminate the infectious foci.

I have had no considerable experience with milk injections in the treatment of sinus disease. I am firmly convinced of the value of vaccine therapy as an aid to treatment and believe that you will get better results with it, as a rule, than with injections of milk.

The point that I want to emphasize more than any other is the fact that in this climate we do not see many of the severe infections that are followed by serious secondary complications, except the imported cases. The acute fulminating cases with their systemic complications are comparatively rare, as compared with the incidence of this disease in the north, where you

have an altogether different atmospheric environment.

In regard to the treatment—in such an environment, there are a great many that will continue to have their disease no matter how little or how much you do, because you cannot operate on the climate or individual's environment and make it a suitable place for these cases to exist. Great numbers of them must seek a change to a suitable climate if they expect to get rid of their disease or forestall the inevitable systemic complications. Comparatively few patients know of the value of a suitable climate on their disease, and many physicians, I fear, do not appreciate the value of Florida's climate in the treatment of upper respiratory diseases. They send patients to the west or southwest and many of them are temporarily or permanently benefited. Even in a favorable climate, it is not a question of weeks, but months or several years are required to restore many of these sinus cases to a permanent state of health.

For an all-year climate, Florida's, I feel, cannot be equalled anywhere on the continent.

#### ACCIDENTAL INJURIES TO THE EXTERNAL GENITALS OF THE MALE\*

R. B. HARKNESS, M.D.,

Lake City.

Severe injuries to the genitals of the male, occurring during the years of physical vigor, are perhaps second only to those injuries that actually jeopardize life, in their potential ill effect upon the life of the individual.

Owing to the comparatively unprotected position of the external genitals, and to their pendulous, flaccid condition during active physical labor, injuries to these organs must be of comparatively frequent occurrence. Yet a careful search of the literature reveals a rather small number of cases reported. The writer has been able to find reported one case in which the skin of the penis alone had been destroyed by accident, and five cases in which the entire skin of the penis and scrotum had been completely avulsed. One unreported case of a similar nature has been brought to my attention, making seven cases in all which suffered the loss of all or a part of the skin from the external genitals by accident. All of these accidents occurred in industrial workers, and in all good final results

are reported, though in some recovery was quite tedious. In all of the above cases sliding or pedicle grafts, supplemented by Thiersch or Reverdin grafts, was the method of repair.

When confronted by a case of this kind, the operator is left largely to his own resources, as the text-books give very little of detailed technique. In one of the above cases, where the penile skin had been torn away<sup>1</sup> the repair was quite simple, as far as the penis was concerned, as there was sufficient skin and mucous membrane left attached to the distal extremity of the shaft, to reflect back over the shaft, and stitch to the torn edges of the pubic skin. In two of the other cases<sup>2</sup> there was sufficient of this distal skin and mucosa to reflect back over the shaft of the penis, partially covering it. In both, the repair was completed by the use of skin grafts. In the case where the penile skin alone had been destroyed,<sup>3</sup> the shaft was covered by the use of pedicle grafts from the scrotum. The testicles were covered immediately by the simple device of drawing the torn edges of the perineal skin together in the mid-line, except in one case,<sup>4</sup> in which at a subsequent operation, pedicle grafts were dissected from the thighs, and united in mid-line, thus forming an artificial scrotum.

*Report of Case.*—Negro boy, sixteen years old, referred by Dr. P. C. Farnell, Lake City, Fla. On morning of May 11, 1927, while working at a stave mill, clothing had been caught on a revolving shaft, stripping off all clothing, and completely avulsing entire skin from penis and scrotum. He was not bleeding seriously, nor was there any appreciable shock. Immediate operation was decided upon. Patient was etherized, field of operation shaved, and the wound, which was badly soiled with black grease, was cleansed with gasoline, then with ether, and finally painted with one-half strength tr. iodine. Starting at the torn edge of the skin in the right inguinal region, the skin of the right groin was tunnelled by blunt dissection, till the denuded penis could be extended full length in this pocket. Over the glands a small opening was made through the skin, and a slight cuff of mucous membrane that remained just back of the corona, was stitched to the skin edges. An indwelling catheter was allowed to stay in bladder till healing had taken place at this point, when the patient was allowed to pass his urine through this opening. This he did without any soiling, by lying on his side, during the act of urination.

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The edges of the torn skin at the base of the scrotum were undermined sufficiently, so that it was possible to unite them in the mid-line. This was done with heavy silk worm-gut sutures, placed well back from the skin margin, as some tension was necessary to bring the edges together. Room between these stitches was left for drainage, and a slender drain of rubber tissue was placed along the buried shaft of the penis, coming out through the line of sutures in the perineum. This drain was removed in 24 hours.

At the end of five weeks, a flap of skin of sufficient size to completely cover the penis was lifted with it from its bed in the groin. The skin flap was wrapped around the shaft of the penis, and the edges fastened together with fine silk

the abdomen. All raw surfaces were allowed to granulate, before the repair was completed by applying Thiersch grafts to the granulating surfaces.



worm-gut sutures. The large uncovered area in the groin was now covered as completely as possible, by mobilizing the skin on the thigh below and the abdomen above the defect. The edges of this skin were sewed together as far as possible with heavy silk worm-gut sutures, placed well back from the edges, and the tension minimized as much as possible by flexing the thigh upon



The outstanding features of this case were the complete absence of shock, after such a severe injury, and the remarkable way in which nature reformed the scrotum, as can be seen in the photograph taken about four months after the repair had been completed.

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#### DISCUSSION.

*Dr. L. M. Anderson, Lake City:*

I am not much of a surgeon, but I would like to say something about this case, because I was cognizant of it all the way through. I want to insist that you can get much better results when you use the whole skin graft. This case looked hopeless to me and I must say Dr. Harkness deserves a great deal of credit for the result. You can hardly tell it now from before the accident.

## SYNERGISTIC ANALGESIA IN LABOR\*

FRANKLYN THORPE, M.D.,  
Tampa.

Probably since the beginning of time no other dreadful and painful experience has confronted as large a proportion of humanity as childbirth.

Medical science, in its advance, has contributed to the relief or alleviation of suffering in almost every other painful condition of life, and yet, in perhaps the most general and most painful condition of all, that of childbirth, it has, until very recent times, seemed singularly backward. So noticeable has it been, that it would seem to go a long ways towards proving the truth of the claim often made, that obstetrics is the poorest handled of any of the specialties of medicine. Progress towards the perfect method for the relief of pain in childbirth must of necessity be slow, but, in the meantime, any safe method which contributes to the mitigation of this direful ordeal must be commended.

Since Gwathmey's first paper on "Painless Childbirth by Synergistic Methods," in 1923, probably no other single contribution to this particular field has caused as widespread interest and discussion. Since that time numerous papers with statistical reports have appeared from nearly all parts of the country. A few have had objections and faults to find, but by far the greater consensus of opinion by those having the most clinical experience with the method seems to be in accord with that of Harrar of the New York Lying-In Hospital, who in summarizing his results in 5800 analgesized labors at that institution, concludes that it is a simple, safe procedure which greatly relieves pain in over 85% of the cases without prolonging labor or endangering the safety of the child.

It is a singular but striking fact that by far the greatest amount of criticism seems to arise from those having the least clinical experience with the method, as a careful perusal of the literature upon the subject will show. The synergistic analgesia employed in labor, where only small amounts of drugs are used at relatively wide intervals, is mistakenly confused with the rectal anaesthesia of surgery where large amounts of ether must be used if not supplemented by synergists, and the objections of the latter are laid at the door of the former. It is claimed by some, having what would seem to me

more pharmacological training than clinical experience, that no true synergy exists between morphine and magnesium and that, although the contrary is apparently borne out by animal experimentation, it does not necessarily follow that the same holds true for human beings; and yet it is no uncommon sight to see the fetal head bulging on the perineum with no great apparent discomfort to the mother after a single primary injection of a small dose of morphine and magnesium, given hours before. It is claimed that in the laboratory, ether, when mixed in a test tube with the same percentage of olive oil used in the rectal mixture, will not volatalize; and yet in the labor room, we invariably smell ether on the patient's breath 3 to 5 minutes after instillation of the ether-oil mixture. It is claimed that the injection of magnesium sulphate following the rectal instillation of the ether-oil mixture does not prolong the action of the ether; and yet, with its use, it is a common experience to witness an analgesia lasting 3 or 4 hours following the administration of the rectal mixture which contains only 2½ ounces of ether. It is claimed that the quinine used in the rectal mixture as a uterine stimulant can not be absorbed by the lower bowel; and yet we go on having patients complaining of tinnitus and recovering the quinine in the urine. Among other claims made against the method are those of greater injury to the liver than by inhalation, lack of control of the anaesthetic once given, rectal irritation, etc., etc., but when one considers the amount of ether used, 2½ ounces, the rate of absorption of this small amount, and the percentage of olive oil with which it is mixed, it is hard to regard these objections in a very serious light. In the rectal anaesthesia of surgery, before the use of supplementary synergists, it was common to use as much as 6 ounces of ether combined with 2 or 3 ounces of olive oil. Its introduction into the rectum was customarily preceded and often followed by profuse soapsuds enemata. This amount of ether produced a deep anaesthesia lasting many hours, which often constituted a real objection to the method. Anyone who has seen the rectum through the proctoscope after a violent flushing with soapsuds enemata will realize that soap is a marked irritant to the mucous membranes. In the words of Hirsch, one of our leading proctologists, "If you don't believe that soapsuds inflame mucous membranes, just try a little in your eye." So that, in pouring large

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amounts of ether combined with small amounts of olive oil over already inflamed surfaces as was done in the rectal anaesthesia of surgery, it is not to be wondered that a certain percentage of cases developed proctitis. In the first 300 cases of my series, all ward cases where the soap-suds enema was used routinely, there were 6 patients who complained of slight irritation upon defecation for a day or two following delivery. In at least 2 of these patients, the cause could well have been attributed to the existing hemorrhoids. In the last 150 cases of my series, all private patients, where 5% soda bicarbonate enemata were substituted for the soap-suds, no cases of rectal irritation were noted. The effect of the method as used in labor seems, from a clinical point of view, at least, to be that of a true synergistic analgesia, in contradistinction to the rectal anaesthesia employed in surgery. In my series, I saw no cases of deep anaesthesia; in fact, I have yet to see the first case which, if sleeping, can not be aroused to answer questions. The answers may not of course always be lucid, or coherent, and in many patients one will be surprised to note an amnesia shortly following the rectal injection, but they can invariably be awakened with little difficulty.

Shortly after the adoption of the method as a routine measure for normal labors by the New York Lying-In Hospital, it was adopted at first for trial, and later as routine procedure, by Dr. Louis E. Phaneuf at the Carney Hospital, Boston, under whom I had the privilege of serving as resident obstetrician. During my term there, we used this method in approximately 300 cases keeping "analgesic charts" on the patient's progress and reaction. These charts recorded all pertinent data such as: the age and parity; time and mode of onset of labor; fetal position and presentation; stage of labor with the frequency and duration of contractions when the first injection was given; amount of morphine and magnesium used; the patient's reaction to the injection, whether sedative, unchanged, or exciting; stage of labor when rectal instillation was given; effect of the instillation, whether retained, expelled, irritating, sedative, unchanged, or exciting; contractions of the uterus, whether increased, decreased, or not affected; delivery, whether with or without forceps; time elapsing between rectal instillation and delivery; whether or not additional rectal instillations or supplementary ether by inhalation were used, whether

or not occipito-posterior positions rotated normally; together with the condition of the baby, whether born crying, apneic or asphyxiated. Except that my results in private practice have been somewhat better than with the service cases, due to closer supervision and more experience, they are in all other respects the same. Without attempting to give a detailed statistical and analytical report here, the more important findings of this experimental study may be briefly mentioned. Duration of labor was slightly shorter than that usually given as the average for normal labor in both primiparæ and multiparæ. Fetal mortality was slightly less than that usually recognized as more or less inevitable, and was due to the same causes governing fetal mortality occurring with normal delivery. Pain was markedly relieved in 80% of the first 300 cases, most of which were service cases, and many of which came into the hospital too late for full advantage of the treatment; while in the last 150, all of which were private cases, pain was markedly relieved in 90%, with some degree of relief in an additional 5%. Danger of asphyxia to the child was not increased. Delivery with forceps was decreased. Occipito-posterior positions rotated in about the same percentage as in normal labor. The postpartum reaction of the uterus was good. There was less shock and the condition of the mother, mentally and physically, was better than without its use.

#### TECHNIC OF ADMINISTRATION IN A TYPICAL CASE.

At the onset of labor, the lower bowel is emptied by 5% soda bicarbonate enemata, after which the patient receives the usual obstetrical preparation. The duration and frequency of the contractions are timed by the hand upon the fundus and not by the patient's outcries. It is important to wait until the labor is well established before beginning treatment, thus avoiding cases of so-called primary inertia from treatment. Every effort is made to gain the patient's confidence and co-operation. She is told the object of the treatment, but is not promised a painless labor. In primiparæ, it is best to wait until the cervix is pretty well thinned out and the os at least two fingers dilated, dependent somewhat upon the relative speed or slowness of progress of labor up to this point. In multiparæ, if the pains are of the proper duration, frequency, and strength, one need not wait as long before beginning treatment. A general rule is to wait until



the pains are coming at least in 5-minute intervals and lasting 10 seconds or more. At this time, the patient is given a deep intramuscular injection in the glutei of 1/6 or 1/4 grain of morphine sulphate in 2 cc. of 50% solution of magnesium sulphate. A half-hour after the primary injection, a second intramuscular injection is given consisting of 2 cc. of 50% solution of magnesium sulphate alone. This injection is given, regardless of the sedative effect of the first, to prolong the action of the morphine. The magnesium sulphate injection may be repeated again and again, if necessary, but the morphine is not repeated. If the bowel has not been thoroughly emptied before or needs further cleansing at this time, another soda bicarbonate enema may be given.

The second part of the treatment consists of a retention enema, the composition of which is as follows:

Quinine, alkaloid.....	grains	20
Alcohol .....	drachms	1
Ether .....	ounces	2 1/2
Olive oil, q. s. ad.....	ounces	4

Much of the success of the method depends upon giving the mixture at the right time and this of course varies a little with different cases. The general rules are: to wait until the sedative effect of the morphine and magnesium sulphate have pretty well worn off and the patient is complaining of discomfort with her contractions. The effect of the injections usually wears off as the cervix approaches three or four fingers dilatation. Some patients, especially multiparæ, often feel little pain following the morphine-magnesium injections until near full dilatation so that it is well to watch their progress with occasional rectal examination. The ideal time for the rectal instillation in the primipara is at about four fingers dilatation which is usually about three or four hours after the first injection of morphine and magnesium. In multiparæ, due to their more rapid progress, it may be given somewhat sooner. Another general rule, not always followed, is not to give the rectal instillation if the delivery is expected within an hour, though I have often been mistaken in a quickly progressing labor, and have noted no comparative increase in asphyxia of the child. When ready for the second part of the treatment, the patient is usually placed in a left Simms position and the anus well greased with vaseline. The mixture is instilled by gravity through a size 20 French

catheter as the regular rectal tube is too large. A four-inch funnel and about three feet of soft rubber tubing connected to the catheter by a glass connecting tip, which also serves as a window, is all the equipment needed. The tubing is filled with olive oil, pinched to keep it from flowing, and the tip inserted about four to eight inches into the rectum between pains, guiding the tip with the gloved finger past the fetal head. Filling the tip with olive oil before its introduction, serves two purposes. First, it prevents the introduction of air into the rectum which stimulates peristaltic action of the bowel, tending to bring about expulsion of the mixture, and second, it coats the walls of the bowel with olive oil before the arrival of the ether-oil mixture. Guiding the tip of the catheter past the pressure of the fetal head upon the rectum, allows the mixture to be instilled above it, so that it will not be ejected with the expulsive contractions of the womb. The ether-oil mixture is then allowed to run in and is followed by an ounce of olive oil. In short, the ether-oil mixture is "sandwiched" in between the doses of olive oil. The procedure can usually be accomplished in a single interval between two contractions, but if a contraction should intervene during instillation, the tubing is pinched and firm pressure made upon the perineum by means of a folded Turkish towel until the contraction is passed. The progress of the fluid can be observed through the glass connecting tip between the catheter and soft rubber tubing leading to the funnel. As the last of the olive oil is seen to flow through, the catheter is withdrawn and firm pressure quickly made upon the perineum with the folded Turkish towel. Pressure is maintained upon the perineum, and the patient told to breathe through the mouth, avoiding "bearing down" with her pains as far as possible during three or four successive contractions. This is usually sufficient to prevent the expulsion of the mixture. If during instillation the mixture does not flow in freely, the tip of the catheter may be slightly withdrawn, or inserted a little higher, or the soft rubber tubing gently "milked" towards the rectum. Following the instillation, a deep intramuscular injection of 2 cc. of 50% solution of magnesium sulphate is given to prolong the action of the ether. In posterior positions, breeches, and prolonged labors, I have on occasion, after several hours interval, repeated the rectal instillation, without any observable harmful effect upon either mother or child.

Due to the fact that the method as used in labor produces an analgesia rather than an anaesthesia, it is usually necessary to give a little supplementary ether by inhalation where a low forceps or breech extraction is to be made. Very little additional ether is required and the anaesthetist should be warned that the patient has received the ether-oil instillation to avoid giving too much. Lacerations are usually easily repaired without additional ether.

#### USUAL REACTION OF THE PATIENT.

Twenty to thirty minutes following the primary intramuscular injection of morphine and magnesium sulphate, the patient quiets down, if she is a noisy one, and may even drowse intermittently. Because of the easily apparent sedative effect following this injection, one unfamiliar with the prolonging and augmenting action of the magnesium sulphate solution on morphia, might easily be tempted to omit the second injection of magnesium sulphate solution due at this time. Following the second injection the patient usually remains quiet with little complaint for three or four hours. Nurses used to judging the stage of labor by the patient's outcries must be taught to watch the progress of these patients more closely than normal labors, or there may not be time to administer the rectal ether-oil mixture. Many, especially multiparae, have gone on to full dilatation before the nurse was aware of it. I have been hurriedly summoned many times by a nurse surprised by finding the head bulging on the perineum with the patient in no apparent discomfort. Usually, however, the effect of the injections begins to wear off before full dilatation. Following the rectal instillation, a slight stage of excitement is not uncommon but the patient seldom becomes unruly, gagging, or nauseated as is so common with ether by inhalation. Following this the patient may be slightly "ether jagged," singing and talking, or, what is more common, becoming drowsy between contractions. During contractions she reacts to make use of her pains, usually recognizing those about her. Fear complexes and inhibitions so commonly seen in normal labor are almost never met with. Following the birth of the child, it is seldom that the mother is too drowsy or tired to inquire as to the sex of the child.

#### SUCCESSFUL APPLICATION OF THE METHOD.

It has been claimed that synergistic analgesia is a method for experts, for the hospital only,

and not adapted to home use. As a matter of fact quite the contrary is true. A certain amount of judgment and technic must be employed even in giving a simple hypodermic, if the best results are to be expected. By exercising an ordinary amount of judgment and skill the method will greatly relieve pain in over 90% of normal labors. However, in order to obtain the best results there are a few points which are essential. The normal progress of labor varies a little in each individual patient. The time of administration of the rectal ether-oil mixture is one of the most important factors for well-controlled pain in labor. It should not be given too soon, nor yet when the head is seen bulging on the perineum, and the best results expected. On this account it perhaps requires a somewhat closer observation of the patient's progress by the doctor, interne, or nurse, than without its use. If the stomach is not full of food, nausea and vomiting seldom occur. The lower bowel should be well emptied at the proper time—not just before the rectal ether-oil mixture is to be given. Soda bicarbonate enemata are preferable to soapsuds. In giving the rectal ether-oil instillation the tip of the catheter should be guided above the pressure of the fetal head on the rectum. The magnesium sulphate should always be given by deep intramuscular injection. Most failures are due to faulty technic rather than to judgment.

While one still hears the story of the peasant women of certain foreign countries who work in the fields up until the baby is about to be born, then brave their labors alone by the roadside, it has seemed to me that this story, with its implied nonchalance, most often came from men. I do not recall any case in my own experience where women were averse to being helped with the pains of labor. Moreover, with the nervous, high-strung temperament of our women, with more difficult labor, and with consequently greater resultant shock, they need all the relief of pain they can get. And yet, insofar as the relief of suffering in this painful condition is concerned, it is an undeniable fact that until very recent times our technic consisted chiefly of standing by the bedside murmuring, "Courage, madam, courage," with each agonizing labor pain.

Certainly, to witness a tortured human being like an animal in a trap, her shrill cries piercing the air, her brow bedewed with the sweat of agony and eyes clouded with fear and anguish,

as contrasted with the normal analgesized labor, should convince the most skeptical that a worthwhile step towards the alleviation of pain and suffering has been made by this safe and simple method.

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## PHYSIOTHERAPY AN ADJUNCT TO MODERN THERAPY\*

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I assume you are all interested in physiotherapy, if for no other reason than that it has been recently recognized by the American Medical Association which has appointed a council to regulate and govern this new department, and has made it a definite and recognized branch of modern medicine.

Physiotherapy has only assumed the importance it deserves since the war which is due to a development of technique and a marked improvement and standardization of apparatus. Quoting the Council of the American Medical Association, "Physiotherapy is a term defined to treatment of disease by various non-medicinal means. It comprises the use of physical, chemical and other properties of heat, light, water, electricity, massage and exercise. There are certain definite indications for the use of some one or a combination of several of these agencies in the treatment of disease, but to depend upon these agencies only in lieu of better proved methods, or to employ them without having first thoroughly studied the patient from the standpoint of careful diagnosis is harmful practice.

"The physical measures that have been found to have certain therapeutic value, both by long clinical experience and by laboratory research, include heat, natural and artificial, hydrotherapy, light, electricity, massage and therapeutic exercise. Experiences indicate that a selected combination of measures offer the best results in certain pathological conditions; in other conditions, such measures serve as a beneficial adjunct to the usual medical and surgical treatment. Above all, continued treatment by physical measures seems to produce better functional results than when the patients are left to their own devices in securing restoration of function. The Council of Physiotherapy feels that the following considerations must receive the most careful attentions from the medical profession:

"1. Physics, physiology, and biochemistry must be called on to dispel the empiricism of the past and to prove the true scientific value of various physical agencies.

"2. Physical therapy must be recognized as a definite part of medicine, practiced and con-

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trolled by graduate physicians. It should be used only as one of the triad of medicine, surgery and physiotherapy. It should be prescribed only after careful physical and laboratory examinations of the patient have been made. It should never be prescribed except by a physician thoroughly trained in the use of physical agencies. The treatment of disease, whether by drugs, surgery or physical agents, belongs solely in the realm of medicine, yet many physicians may refer patients to technicians, masseurs, gymnasts or nurses who have received training in physiotherapy or even to members of the various cults for physical therapeutic treatment. Therefore, physiotherapy must be recognized as a component of medicine, and patients requiring this type of treatment should be referred only to physicians trained in this specialty. In this way the use of these methods by charlatans will be largely eliminated.

"3. A subject as intricate as physical therapy requires more study than the salesman's assertion that the snapping of a switch or the pressure of a button will definitely assuage any pathological change."

Hence, we get some idea of the scope and limitations of this work. Physiotherapy to the large majority of practitioners, however, means electrotherapy, and it is to this field that I shall confine my discussion. Even so, it is too extensive a field to be covered by a single paper.

The first of these physical measures that I wish to bring to your attention is the much-maligned diathermy. Diathermy, as the word implies, means to heat through. This agent, owing to its being derived from a piece of rather awe-inspiring apparatus, and to the activity of the manufacturers, has been and is still being much abused by the various cults outside of our profession and also it must be admitted by some of the less scrupulous and more ignorant in the profession. This abuse cannot detract from its value in properly selected cases and if the agent is looked upon as one having a limited use, and not a cure-all, it will be found to be a powerful aid in the treatment of certain diseases and injuries.

Diathermy is merely the therapeutic application of a bi-polar high frequency current to the body, the result of which is the development of heat in the deep tissues and bones throughout the area treated. The resultant effects of the treatment are:

1. Production of internal heat.
2. Stimulation of cell metabolism.
3. Stimulation of phagocytic activity.
4. Stimulation of vasomotor mechanism and an increased arterial blood supply to the part treated.
5. Analgesia.

Also the general body temperature is raised after local diathermy due to the dissemination of the generated heat by the blood stream. With these facts in mind, the type of cases in which diathermy is indicated can be readily picked out, and to list those which give the best results is all that this paper permits.

Sprains of all types, especially when marked effusion is present, acute fractures, delayed union and nonunion of fractures, acute traumatic arthritis and bursitis and acute muscle injuries are the traumatic conditions that call for diathermy if it is desired to cut down the disability to the shortest possible time. Acute and sub-acute infectious arthritis, if pus is not present and those due to gonorrheal infections, usually are given immediate relief of the pain and rapid improvement.

Cases of bursitis, myositis, synovitis and neuritis, due to chronic infectious conditions, are of course preeminently fitted for diathermy and many of the chronic urological and gynecological lesions clean up quicker with this agent than with those commonly used. In infantile paralysis, the nutrition of the paralyzed muscles is apparently aided by the heat generated in them between the two electrodes. The use of diathermy in pneumonia and in pleurisy is of great help.

Diathermy is also of great value in the prevention and treatment of surgical shock. Crile has used the method of treating directly through the liver while the patient was undergoing operation and by so doing has been able to reduce the mortality resulting from shock in severe surgical cases.

Where there is limited motion or stiffness of the joint, diathermy will work wonders in restoring function or bringing the member back to full usefulness. In fact, it is the treatment par excellence in any case of fibrosis regardless of where the condition is or the cause of same. The contraindications of diathermy are liability to hemorrhage and liability to cause absorption into the blood, or lymphatics of dangerous quantities of toxic material, such as bacteria, pus or enterotoxins.

Diathermy is a valuable adjunct in the treatment of angina pectoris, cirrhosis of the liver, cardiac lesions, endometritis, epididymitis, osteomyelitis and a host of other conditions.

Other forms of electricity which have a definite use in modern medicine are the sinusoidal, galvanic and faradic currents. The sinusoidal is of special use in producing muscle massage and exercise as regulated by the Morse-Wave generator and is of great value in breaking down fibrotic joint conditions and in the treatment of constipation due to stasis resulting from a relaxed bowel condition or ptosis.

The faradic has a special use in the testing of paralyzed muscles and in the graduated stimulation of muscles in cases of nerve injuries.

The galvanic is a direct current, thereby having a positive and a negative pole, each of which has a distinct chemical action of its own, which must be understood to obtain results. This modality has a greater popularity in Europe than in this country, and from my own experience I find it an exceedingly valuable modality for which I am finding new uses from time to time. In my opinion it is just as valuable as diathermy or quartz light, and deserving of much greater recognition than it has received. The galvanic current has a distinct effect on sprains with congestion, myositis, lumbago, Raynaud's disease and neuritis of various kinds and is at times of greater and more rapid benefit than diathermy or any of the other modalities.

The galvanic also has an electrolytic and ionization action on various metallic substances and drugs. By this method the substances are driven into the tissues and deposited. This process is used in the treatment of chronic ulcerations, especially of the varicose type, in otitis media and in similar conditions. The galvanic action aids in the absorption of inflammatory products, relief of pain and relief of spasm.

Ultraviolet, or quartz light, on account of its importance in the therapeutic field deserves much more space than is possible to give it here. As with diathermy, we frequently find this agent greatly abused, but must not condemn it for that reason. With proper technique, the air-cooled quartz light produces a definite tonic effect on the body functions resulting in an increase in the hemoglobin, red cells and platelets of the blood and an increase in metabolism, especially that of calcium and phosphorus. The rays are appar-

ently absorbed by the circulation and distributed to all parts of the body by it. Rickets, anemias, medical and surgical tuberculosis, except active pulmonary cases, chronic infections, neurasthenias, burns, vomiting of pregnancy and other toxemias, are the main types of general conditions calling for this treatment.

Often an unaccountable effect on deep-seated or superficial pain is noticed after treatment. Certain skin diseases respond readily to this light, among them being erysipelas, alopecia areata and certain cases of eczema, psoriasis and others. Here also it is not a cure-all, but a great aid to the dermatologist.

Of the various diseases for which ultraviolet is recognized as the treatment, the first and foremost is rickets and for this disease ultraviolet is a specific remedy. It is said that cod liver oil and food irradiated with ultraviolet carry the properties of sunlight to every cell in the body. The quartz light is very efficient in combating infections, tubercular peritonitis, bone diseases and so forth. Cases of intestinal tuberculosis, certain cases of gastric and duodenal ulcers and mucus colitis probably respond better to ultraviolet therapy than any other form of treatment.

The rays of the air-cooled quartz light vary from those of the water-cooled in that the former have the longer wave lengths and more nearly correspond with those of natural sunlight. The long rays are tonic in effect and used in conditions where building up of the general body condition is wanted. They cause an increase in metabolism, a building up of the blood condition and one of its greatest uses is as a detoxifying agent destroying toxins within the blood stream. This can be readily shown in treatment of influenza, vomiting of pregnancy, in the severe toxemias of pernicious anemia and even in hopeless cases of cancer where it gives a feeling of well-being and comfort.

Patients receiving ultraviolet in connection with internal medicine, show a more rapid improvement than those not receiving it, thereby showing that ultraviolet is a valuable adjunct to internal medicine. The same holds as well for the surgeon, as patients receiving quartz light treatments before and after operations usually have less nausea and make a more rapid and uneventful recovery.

The water-cooled ultraviolet light has a distinct action from that of the air-cooled. The rays of the water-cooled are very short in length,

have very little penetrating power, and the shortest wave lengths are readily absorbed by passing through a few centimeters of air. Hence few of these short rays can be obtained directly from natural sunlight. Intense erythema is produced by very short exposures and the action of these rays are decidedly bactericidal in contrast to the tonic and stimulative effects of the long air-cooled is generally less used than the air-cooled; destroy infection is generally not fully appreciated. It will often give results after every known form of medical treatment has failed. Racini has shown that it will destroy bacteria in a few seconds' exposure and even destroy spores in exposures of seven to twelve minutes.

Being water-cooled this light can be used in close contact to the body and even under pressure against the skin. By the use of quartz rod attachments, the rays can be used in the cavities of the body or passed into a sinus. The water-cooled is generally less used than the air-cooled; however, it is applicable to a greater variety of cases than the air-cooled. Its use in ulcerative conditions is often dramatic, causing rapid healing and relief of pain. It is a near specific in the treatment of hay fever, likewise in the treatment of Vincent's angina and gonorrheal ophthalmitis.

The difference shown between the water and air-cooled ultraviolet light is a typical example that each current in physiotherapy has its peculiar physical, chemical and physiological activity, and that each modality has its separate use which must be thoroughly understood to obtain results. Furthermore, I wish to emphasize that the best results are only obtained in the majority of cases by intelligent use of a combination of the various modalities of physiotherapy with proper diagnosis in conjunction with medical and surgical measures where indicated.

In closing, I wish to quote Sampson in which he says: One of the outstanding therapeutic lessons learned from the reconstruction was that physiotherapy has more than made good and is destined to be the salvation of therapy; that it is an indispensable part of medical and surgical practice; that it is not a separate cult or ism, but can do its best work only in institutions such as general hospitals or in group practice where expert advice from all angles can and will always be given; that it is a very large and special field, so large that I can never expect to live to see the limits reached; and that it requires special training and experience and much more

time than can be given it by men following other specialties at the same time.

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### FRACTURES OF THE UPPER AND LOWER JAW AND THEIR CORRECTION WITH THE DENTAL SPLINT\*

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In fractures of the upper jaw we have involved surgically the maxillary bones, the lacrymal, the malar, palate, inferior turbinated, nasal, the lateral masses of the ethmoid, and the nasal septum, and any or all of these are liable to be involved in injuries to the maxillary bones. In a case which I particularly remember and set in 1916, a transverse fracture of the maxilla, all bones named above were either fractured or slightly involved, except the lacrymal and the palate. In these cases, and in all fractures for that matter, it is impossible to make a correct diagnosis without the aid of the X-ray.

Fractures of the maxillary and other bones of the face vary in extent from the slight destruction of the alveolar process to a displacement backward and downward of the entire facial proportions of the head, especially in transverse fractures as noted above. In these fractures (transverse) it is common to find the malar bones crushed and sometimes driven into the maxillary antrum. This is the case nearly always in fractures caused by horse kicks, auto and railroad accidents. In transverse radiating fractures of this area where the line of fracture is through the orbital region you will get a sagging down of the frame work of the face being supported only by the soft tissues, usually accompanied with severe shock and possibly some involvement of the basal structures of the brain.

In the maxillary regions there are several classes of fractures, the principle ones being: articular, comminuted, compound, impacted, indirect, double and the most difficult one, the transverse. These terms are familiar to you all

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so I will not take up your time in defining each one.

In the treatment of fractures I shall only go into the mechanical correction and reduction from a dental surgeon's standpoint and the necessary prophylaxis in connection with the same. The use of wet poultices, application of icebag or packs are very good to combat swelling due to the infiltration of serum into the tissues. Difficult breathing owing to swelling can in many cases be relieved by the use of adrenalin chloride; apply same in the nostrils occasionally until the fractured parts can be set and swelling reduced.

Fractures are more numerous in the mandible or lower jaw than in the upper jaw owing to location and position. It acts as a guard for the face and also owing to the loose connection we do not so often have brain complications in these fractures. Also fractures of the mandible are more numerous in men than in women as the mandible is very often broken in fist fights and free-for-alls, and naturally here we charge alcoholism as a predisposing factor. The mandible may be broken by a direct or indirect blow in any part, especially in the body of the bone, owing to the weakening of the bone by the tooth sockets. Only about 4% of the fractures that occur in the mandible are of the rami or its processes.

In fractures of the lower jaw there usually is a greater displacement of the fragments than in those of the upper jaw, this is produced primarily by the violence causing the fractures. Also this displacement or distortion is magnified or aggravated by the muscles attached to the bone in the area of the fracture. Usually in any fractures of the mandible you will have at least three of the following muscles to contend with: masseter, temporal, the two pterygoids, mylohyoid, digastric and the geniohyoid. The action of these muscles must be known and the splints so constructed as to equalize them and also hold firmly together the fractured parts in their proper relation.

You will generally get a combination action in fractures of the mandible, a down-backward, downward-lingually, downward-buccally and especially where there is any destruction of the muco perosteal membrane, generally accompanied with pronounced swelling, a discomfort for the first twenty-four to forty-eight hours.

The places of frequent fracture are through the symphysis, mental foramen, angle of the mandible, through the neck of the condyle, coronoid process, and in case where a number of teeth have been extracted and no bridge set to replace teeth lost. Deformities resulting from malunion of fractures are more noticeable in the mandible than in any other bone of the face; however, there should be few of these with the proper care, and a properly constructed dental splint.

In fractures of the upper and lower jaw the following splints are used: Gunning, Kingsley, Hullihan, Gilemore posterior, Angle's band jack-screw, and interlacing wiring.

The Gunning splint is used only in cases where all the teeth are missing and is constructed by taking impressions and bit of the broken jaws and the assembling of the broken fragments in their proper relation to each other, constructing a wax model splint similar in manner to the construction of a full upper and lower denture with the exception that both lower and upper plates are constructed together and the area that usually hold the teeth is of the same material as the body of the splint. In the anterior portion, construct a small opening to allow a tube to be placed when the patient has to take nourishment. The wax model now constructed is invested and then when investment is hard, is boiled out, leaving the mould which is packed with rubber, the same as in plate work, vulcanized, then polished. These steps are all familiar to dentists, being the same in procedure as denture work that we do every day in the practice of our profession. When the splint has been polished and is ready to set, the broken fragments of the jaw are set and adjusted into the splint and are held in the position by a four-tail bandage or head harness. This splint can be used in any class of fracture where all the teeth are missing.

The Kingsley splint is similar to the Gunning except the splint is constructed to fit over the teeth, as here all or most of the teeth are present. Also there are two facial bows or arms made to extend out of the mouth parallel at the corners, then turn backward to a point about opposite the ears where the harness or bandage is attached and fitted over the head to hold the parts firmly in place after they are set. This splint is used only in cases of a transverse fracture of the upper maxillary bone extending through or near the orbital region.

The Hullihan splint can be used in all cases if desired except the two named above. This splint is similar to a trough turned upside down, the openings on the under side to conform to the teeth. This is accomplished by constructing a wax model as described above and following out the technique as stated. This splint has the advantage over some others, in that the patient can open his mouth to take nourishment.

The Gilemore posterior splint is constructed similar to the Hullihan except that it covers only the posterior and lingual surfaces of the teeth and the splint is wired to the teeth instead of being cemented after the fracture has been reduced.

Angle's method is to interlace with wire the teeth of the upper and lower jaws in such a way as to hold the broken parts together. There is a certain drawback to this method for several reasons: in case of a sick patient, vomiting, you must cut the wires or he may strangle to death on his vomit. Also the teeth have a tendency to change position under stimulation and thereby may allow the parts to move and get a malunion.

I prefer his jackscrew method instead of the wiring as here the two jaws are not fastened together.

With this abbreviated description and a careful study of the clinical splints and their technique of construction, the field is covered about as well as is possible in the time allotted.

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#### DIARRHEA CAUSED BY LAMBLIA INTESTINALIS—WITH REPORT OF A CASE\*

WARREN QUILLIAN, M.D.,

Coral Gables.

This subject has been chosen for discussion because it is of practical importance and interest to local physicians. Clinical syndromes occurring as a result of the invasion of flagellates and protozoal organisms in the human host are frequent in southern Florida. This paper is presented with the hope that general discussion will be invoked. The literature concerning lamblia intestinalis is meagre. Doubt is still expressed in some quarters<sup>1</sup> concerning the pathogenicity of this type of flagellate.

The flagellates comprise a group of protozoa which have one or more whip-like processes of the cytoplasm as their distinguishing characteristic. The lamblia is widely distributed in tropical climates. Fantham and Porter<sup>2</sup> have reported a hundred and eighty-seven cases of lamblia occurring among thirteen hundred and five British soldiers invalided home from Gallipoli and from the western front during the recent World War. Most of the reported cases have been outside of the United States. But it is probable that a careful, systematic search of stools of patients suffering with diarrhea will reveal the presence of many heretofore unsuspected cases in the southern states. Three such infections came under my observation at Savannah, Georgia, and during the past two months I have seen two here.

The organism is distinctive in appearance. Its contour is of pear shape, and it is bilaterally symmetrical. Two suction discs are present on the ventral surface. From these and from two ridges which extend along the center axis project four pairs of flagella, which render the lamblia very active. The size varies from ten to twenty microns in length and from five to twelve microns in breadth. There are vegetative and encysted forms, the latter being oval and from ten to fourteen microns in diameter. The vegetative forms thrive in the small intestine. The cysts usually appear in the stools of infected individuals. Rats and mice are alleged to be the intermediate carriers. The dejecta of these animals contaminates cereals which, in turn, are ingested by humans.

*Symptoms.*—The outstanding symptom is the diarrhea. It has been observed that the movements occur most often during the early morning hours and are associated with marked rectal tenesmus. There may or may not be disturbances of digestion. As a rule there is a vague type of abdominal pain referred to the right lower quadrant. In my cases there has been no rise of temperature. The stools are watery, contain mucus, and are frequently blood-stained.

*Diagnosis and Prognosis.*—Accurate diagnosis can be reached only after a careful examination of stools or colonic irrigations is made. Only by laboratory observations can chronic cases be differentiated from amoebiasis and from bacillary dysentery. The history and clinical findings will usually differentiate it from a tuberculous

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\*Read before the meeting of the Dade County Medical Society, Miami, Florida, Friday evening, September 2, 1927.

enteritis. The prognosis depends upon the time-period at which a diagnosis is made.

At this juncture I should like to report a case which came to my attention on June 9, 1927:

L. B. C., a white male, aged 36, was found to be complaining chiefly of a diarrhea of four days' duration. There was no history of familial diathesis toward tuberculosis, cancer, or diseases of the digestive system. He drinks coffee and home-brew in moderation, but is an excessive smoker. He was born and reared in Key West, but for seven years following 1917 he had lived in North Carolina and Georgia, returning to Miami in the fall of 1924. During the past ten years he has had four attacks of renal colic. During this time he has also suffered with constipation and hemorrhoids. The remainder of his past history is unessential. The diarrhea had developed four days prior to this date; and the patient was at a loss to determine the causative factor, inasmuch as he had experienced no gastro-intestinal upset. He complained of some generalized abdominal pain; his temperature was normal; the pulse was 100, and the respiration 24. Total leukocyte count was 1200, with a polymorphonuclear leukocyte percentage of 70, and eosinophiles 4%. The skin was dry, and the patient complained of weakness. There had been no nausea and no vomiting. Digital examination of the rectum revealed a cluster of internal hemorrhoids, and there was considerable spasm of the sphincter ani. A specimen of feces was sent to the laboratory, which reported the presence of large numbers of lamblia intestinalis.

It is of interest to note in the case herewith presented, that the patient had not partaken of cereals for many years. His apartment was, so far as he knew, free from rodents. Consequently, I was at a loss to determine the source of the infection. The patient had been treated periodically for several months for an obstinate constipation. Ten days prior to the onset of his diarrhea, as he shamefacedly admitted, having become tired of the irksome routine advised by his physician, the patient had consulted a friend who was known to the populace as a naturopath. The latter promised relief of the constipation within two weeks. It seems that the therapy consisted essentially of daily rectal irrigations with a liquid of beautiful color. After four irrigations the patient became alarmed at the noticeable lack of aseptic technique used by his naturopathic friend; and forthwith discon-

tinued the treatment. But it was too late. Four days later he returned to his original physician a sadder and a wiser man. His constipation had been apparently relieved, inasmuch as he was having ten to twelve stools per day and much tenesmus as well.

Proctoscopic examination on the following day was made with considerable difficulty on account of the irritability of the sphincter ani and the extreme local tenderness. The rectal mucosa was markedly inflamed, especially in the vicinity of the internal hemorrhoids mentioned above. Proximal to the internal sphincter were seen several ulcers about the diameter of a dime, irregular in contour, and superficial in appearance. They were comparatively free from exudate, and their bases differed very little from the appearance of the adjacent gut. Sigmoidoscopic examination was not attempted at this time.

General physical findings were negative, except for some carious teeth and a marginal gingival infection. The urine had a trace of albumen, and contained some pus and epithelial cells.

The patient was placed on a modified Coleman diet. He was advised to remain in bed, and to apply heat locally to the lower abdomen at regular intervals. Each morning a hot irrigation consisting of two quarts of 1:2000 silver nitrate solution was used. During the afternoon he was given a retention enema consisting of two ounces of castor oil to which had been added four drams of balsam peru. During the interim, when tenesmus became marked, he used a retention starch enema of three ounces. After a week no marked improvement had been noted, except that the tenesmus had abated somewhat. Dr. Welch, who saw the patient in consultation, advised the additional use of a lactic acid culture, in an effort to change the intestinal flora. Accordingly, a further modification of diet was made, and the patient received daily a quart of lactic acid milk. Progress was satisfactory then for several weeks. Periodically, however, recurrent attacks of diarrhea would supervene, characterized by the passage of frequent watery stools during the early morning hours, and followed invariably by a profound mental depression. On the second of August he was given calomel in fractional doses of a quarter grain each for five doses, followed by citro-magnesia. The following day bismuth subsalicylate, one dram in divided doses, was administered. This regime has been carried out



at weekly intervals since this time. The patient is gaining in strength and weight, and there has been no recurrence of diarrhea since August second. Proctoscopic examination last week revealed no gross abnormalities, except an unusually small rectal ampulla and a very irritable sphincter ani. X-ray plates of the chest confirmed the clinical findings of an absence of gross pulmonary pathology. Fluoroscopic study and gastro-intestinal series showed a generalized spasticity of the entire colon, particularly the distal half. There were no ulcers in the rectum or lower sigmoid. Stools have been negative for encysted and motile forms of the parasite since August fifteenth.

The patient is now in North Carolina, having been advised that he would probably recuperate more rapidly if he had a change of scene and environment for a few weeks. He writes that he is feeling well, and suffered no ill effects from driving to his destination through the country. He plans to have a complete study of the genito-urinary tract made when he returns to Florida.

#### SUMMARY.

1. This case report was presented because it is of practical interest to the physicians of this society.

2. The lamblia intestinalis, when present in large numbers, is capable of inflicting injury upon the intestinal mucosa either mechanically or by virtue of a toxin which is elaborated.

3. The unusual mode of infection illustrated in this case is noteworthy. It presents a problem which must be solved by regular practitioners.

4. It seems justifiable to assume that the lamblia was directly responsible for the diarrhea in this case at least.

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#### DISCUSSION.

*Dr. P. B. Welch, Coral Gables:*

Dr. Quillian has asked me to discuss his paper. I am sorry I can not do this more intelligently. However, I drew a few conclusions from this interesting case. First, Dr. Quillian has studied this case very carefully; second, that these lamblia intestinalis may at times become patho-

genic; third, I might add that it is my idea that naturopaths might become pathogenic, also.

*Dr. E. S. Nichol, Miami:*

I have had very little experience with patients of this type, to the end that I have given very little thought as to whether or not lamblia intestinalis may become pathogenic. All of my teachers in Chicago were on the side of the fence that lamblia intestinalis do not become pathogenic, and naturally I adopted this idea. However, in Dr. Quillian's case, considering the disappearance of the profuse movements and the healing of the ulcerations under treatment, it certainly looks as though it might be pathogenic.

I believe there has been very little experimental work which has been conclusive. In the United States Army, for instance, the fact that its occurrence in normal, healthy army men was so great among the 6,000 cases studied certainly threw a shadow on the subject of its being pathogenic.

The same thing can be said in regard to its effect on gall-bladder disease. Smithies of Chicago having found the living organism in gall-bladders which have been removed. Because it is found in many cases of gall-bladder drainage, and the duodenum and jejunum being the habitat in man and because it is found in the duodenum, a lot of men have considered it must play a part in gall-bladder disease.

I personally am sort of on the fence. A case of this type makes us think, as Dr. Welch has said, that it must be pathogenic sometimes, and yet Beckert and Hardy have gone over the ground so carefully and are so sure it is not pathogenic it makes us feel that we must accept an isolated case like this one with a good deal of caution.

*Dr. W. A. Claxton, Miami:*

I remember about fifteen years ago when we used to examine feces for parasites we quite often found lamblia intestinalis and at that time it was not considered very seriously. It has been found that one of the best treatments for it is calomel, but it has also been discovered that while calomel washes out the lamblia intestinalis from the intestines, it does not cure the condition permanently, and after they have had a chance to reproduce themselves, they increase in numbers again, and you have the same thing to go through with.

All of you who have been coming in contact with local Southern people for some time know

that every so often they have to have a course of calomel. It has just occurred to me that this course of calomel they have once a month or so washes out these lamblia intestinalis, gets rid of them temporarily, and that they might well be what makes these people feel the need of this every so often. I think there is some basis for this belief, for calomel will certainly get rid of them temporarily and the patient will feel better for a time.

This would bring us back to the point as to whether the lamblia intestinalis are pathogenic or not, and makes us lean a little toward the fact that perhaps they are.

*Dr. Warren Quillian (closing):*

There is very little I can add. I appreciate this discussion very much. There has been a good deal of research work done on this subject, particularly with reference to the use of calomel, and it has been found that calomel alone is not effective, but should in every case be followed with divided doses of bismuth subsalicylate. Negative stools have practically always been found following this medication. However, various other remedies have also been used, and the very multiplicity of remedies suggests that no one line of treatment should be used in every instance.

The only purpose of my paper was to urge more careful analysis of stools in order that we might get more reports of these cases. In this one, I feel that the assumption that it was pathogenic is justifiable, because the lamblia intestinalis appeared in the stools, there was ulceration of the rectum and sigmoid—of course we did not determine the condition of the jejunum, etc.—but after a course of treatment the organisms had disappeared and the ulcers had disappeared.

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#### SOME ETIOLOGICAL FACTORS OF DENTAL CARIES\*

C. J. MASTERS, D.D.S.,  
Jacksonville.

The study of the causes and nature of dental caries has ever been a matter of supreme interest to the dental profession. The prevention of dental caries would be a great boon to mankind, for thereby not only would the teeth be preserved

but also would the great problem of root end infection be practically wiped out.

The further the study of the problem, the more complicated it becomes, involving as it does factors of heredity, internal secretions as they relate to calcium metabolism, diet and nutrition, habits of life, types of oral infection and probably many other forces which at present we do not clearly understand.

The works of Drs. Howe, Walbach, McCullum and others in regard to diet and nutrition in recent years have without question helped us to understand more clearly that which it takes to form healthy teeth as well as to maintain their health after formation. Their clinical experiments have shown us well the relation between general health and health of the teeth and surrounding tissues. Recognizing the importance of diet and nutrition on the other hand we are obliged to consider local conditions as etiological factors in the cause of dental caries.

At one time dental caries was considered an inflammation or degenerative process in the substance of the tooth. Later the works of Miller, J. Leon Williams and others established the fact that acid fermentations are associated with the process and that the lesion in the tooth is in reality a degeneration of the tooth substance by local acids. They recognized that certain acid-forming organisms are associated with the lesions, but they were unable to find any specific type common to all.

In more recent research work, Dr. Bunting has shown that *B. acidophilus* is present in every case of beginning caries. He found that when cultured on a glucose medium, these organisms produced acids capable of degenerating the tooth with the formation of a cavity within a few days to a few weeks. Moreover in mouths in which caries were especially active, *B. acidophilus* was found growing luxuriantly. In a great majority of mouths which were free from caries this organism was not present and in those cases in which it was present it was distributed diffusely and showed no tendency to mass growth. Dr. Bunting placed cultures of this organism with carbohydrates beneath miniature gold cups which were fastened to the buccal surfaces in the mouths of several individuals. The cultures and the carbohydrates were replenished each week. In his own mouth a culture held on a tooth produced whitening of the tooth from two to three weeks. This went on to a superficial decalcifi-

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\*Read before the Duval County Medical Society, July 19, 1927.

cation, but the tooth became so painful that the process was carried no further.

In other cases so treated with exactly the same procedure over a period of months, there was practically no visible change in the surface of the enamel. The only conclusion to this test was that the quality of these teeth was such as to resist the amount of acid formed in this fashion for a time at least, but in all experiments continued the enamel showed signs of decalcification. This is evidence that well-formed teeth resist successfully the acids while poorer quality might succumb to the attack. It also may be stated that the increased susceptibility of teeth to caries during childhood, pregnancy and periods of malnutrition may in part be due to a decrease in the natural resistance of the tooth to acids of local fermentation.

According to present views of the situation the most active factor in the problem of dental caries consists in the degree of activity of the acid-forming organisms in the oral flora and the environment conditions under which they exist. Assuming that this is true, it would appear that the most direct control of dental caries may be found in the reduction of the overgrowth of this organism and changing of the oral environment so that it is not so favorable for the propagation of this type of organism.

Just how this can be done to the best advantage will require a great deal of experimental work. At present the best method at hand is thorough mouth hygiene and the use of certain

antiseptics that seem to be of value. Metaphen seems to be the best antiseptic to reduce this bacterial activity. It is used with the hope that when the symiotic balance of the oral flora is re-established, it may not be so distinctly aciduric in type. In this our procedure is not unlike that employed in the treatment of Vincent's infection. Here, too, for some unknown reason we find in certain mouths intense overgrowths of a particular type of organism. Its specific effect is a proteolytic disturbance of the soft tissues with the production of ulcerative stomatitis. We find that by the use of suitable antiseptics we may reduce the oral bacterial activities and that when they have been reduced over a period of time the new flora which is established subsequently will be of a different character and the Vincent's organisms will no longer predominate.

In the attempt to reduce *B. acidophilus* overgrowths in the mouths of persons susceptible to caries, it has been found that the behavior of this organism under metaphen is quite similar to that of Vincent's organism and by applying the metaphen and instituting good oral hygiene conditions in the mouth in many instances *B. acidophilus* does not subsequently resume its former activity.

Just how long this organism will remain in check we are unable to say. It will take considerable experimental work over a period of several years to determine the value of any treatment in dental caries. However, it is hoped that we have at hand a treatment that will aid us in taking care of these cases.

## NOTICE!

### Fifty-Sixth Annual Meeting

*of the*

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*will be held at*

SAINT AUGUSTINE

*April 2nd and 3rd, 1929*



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## STATE HEALTH DEPARTMENT MEETS THE EMERGENCY

The recent hurricane which visited the east coast of Florida has demonstrated to the citizens of our state the efficiency of a well-conducted state health department. Our Health Officer and his associates have been in this area since the day following the storm and have worked like Trojans to prevent the spread of disease. The following biologics were immediately dispatched to the area:

Typhoid vaccine for immunizing over 11,000 persons.

1,300 packages prophylactic tetanus antitoxin.

1,300 capillaries vaccine virus for smallpox prevention.

150 10,000-unit packages diphtheria antitoxin.

The necessity of a pure water supply was met by immediate bacterial examination of all the municipal supplies and subsequent chlorination where polluted.

Together with the State Health Officer and his associates, the State Board of Health mem-

bers personally made a survey of the storm-swept area.

As a result of the efforts of the various health agencies, the incidence of disease in the storm-swept area has been no greater than in normal times.

#### GORGAS MEMORIAL

With special programs arranged in various parts of the United States as well as in foreign countries, the Gorgas Memorial headquarters in Washington announce anniversary plans for October 3, the birthday of Dr. William Crawford Gorgas. The fight of Gorgas against yellow fever and malaria and his administrative genius as surgeon general of the army during the World War, as well as his famed work in the field of sanitation are to be stressed in these meetings. Thirty-three health corps of the Memorial will participate.

Of particular importance in this year's citation of the various efforts of the Memorial to honor the name of Gorgas is the statement that "one of the leading scientists in the field of tropical medicine" will soon be chosen by the Scientific Board of the organization, to take charge of the laboratory in Panama. This laboratory is made possible by an annual appropriation of the United States government of \$50,000, which is to be supplemented by grants from some twenty-one South and Central American countries.

Panama has given over the use of a magnificent edifice recently erected for a proposed school of medicine to the Memorial, and it is predicted by Memorial officials the research campaign will be under way by November first in these quarters.

The development of the Memorial activities in the field of research will not interfere with the health educational campaign throughout the country, it is stated. The present plan of sending out caravan speakers to the various communities stressing the periodic examination and urging more public support for scientific medicine, will be continued. In the past few weeks these speakers have appeared before 156 groups in the Middle West, have reached millions through the radio, have exhibited health films to 42 associations, with an audience of 24,843, and have added in their trip seventeen daily newspapers to the list for Gorgas health material.

#### STATE NEWS ITEMS

The officers of the Florida East Coast Medical Association have decided to postpone the next bi-annual meeting of the Association, which was to have been held at Daytona Beach, November 2-3.

The recent hurricane is responsible for this postponement, since many of the members who were to have taken active part in the scientific program have suffered heavy losses and as a result, are not prepared to take the time to prepare papers for the proposed meeting.

The meeting will be held at Daytona Beach at a date to be announced later, and we are looking forward to a most enthusiastic one.

Dr. Stuart R. Roberts of Atlanta was to have been a guest on this occasion, and he has kindly consented to come down for the meeting, when it does take place.

The Association hopes to have the co-operation of the Duval and St. Johns Counties Medical Societies, in making this one of the best medical meetings ever held in Florida.

An interesting feature of the 51th annual convention of the American Public Health Association Convention, to be held in Chicago at the Stevens Hotel, October 15th to 19th, inclusive, will be an exhibit of five "traveling health departments," or railroad cars equipped so that they can be rushed to the scene of disaster or epidemic, or so that they can carry health service from a central point to isolated districts. These will be stationed on the Illinois Central terminal tracks. Automobile health equipment will be on view in Grant Park, and 200 exhibits of the most modern health apparatus will be displayed in the Stevens exhibition hall.

This year's convention will be the largest in the annals of public health history. Over 3,000 delegates will attend, including doctors, public health nurses, city and state health officers, hygienists, educators, hospital officials, sanitary engineers, and social workers. The convention has been divided into eleven main sections, covering all the chief health activities and their allied interests. Each section will be directed by an authority in that particular field. The American Child Health Association and the American Social Hygiene Association are to meet with the American Public Health Association this year.

Dr. D. M. Adams, councillor for the ninth district, on October 3rd met with the doctors of Washington and Holmes counties, organizing the Washington-Holmes County Medical Society with a total of seven members in attendance and a possible membership of eleven. Doctor Adams reports a rousing good meeting with plenty of enthusiasm. Plans are on foot now to have a district society meeting at Panama City at some time in the near future. The following officers were elected at the meeting held October 3rd: Dr. W. E. Coleman, Chipley, president; Dr. W. C. Harper, Chipley, secretary, and Dr. H. A. McClure, Chipley, treasurer. Congratulations to the councillor of the ninth district and his associates.

\* \* \*

Dr. Franklin Thorpe of Tampa recently attended the meeting of the American College of Surgeons held at Boston. Dr. Thorpe will spend about three weeks attending clinics in the east before returning to Tampa.

\* \* \*

Dr. E. C. Swift of Jacksonville announces the removal of his offices from 2005 Park Street to 2237 Herschell Street.

\* \* \*

Dr. John S. Helms and wife left Tampa recently to motor to Boston where Dr. Helms attended the meeting of the American College of Surgeons. Dr. Helms expects to spend several weeks in the north before returning to Tampa.

\* \* \*

On Tuesday, October 2nd, the Duval County Medical Society held its first meeting since its adjournment for the summer months. Dr. Frederick J. Waas, president of the Florida Medical Association, gave an address on organized medicine entitled "The Function of the County Medical Society." Dr. Stanley Erwin read a paper on "Heart Disease." At this meeting, the society voted to donate the sum of \$200.00 to the Red Cross for storm relief. This society recently placed fifty annual subscriptions for the health magazine "Hygiea" in all the schools of Duval County, including the city schools of Jacksonville.

Drs. Roy J. Holmes and Milton M. Coplan announce the removal of their offices to Suite 601 Huntington Building, Miami. Practice limited to urology and genito-urinary surgery.

\* \* \*

Dr. Frank Wilson of Jacksonville is spending several months in New York City where he is taking special work in dermatology at the New York Skin and Cancer Hospital. Dr. Wilson will return to Jacksonville to specialize in dermatology.

\* \* \*

Dr. and Mrs. Kenneth Morris of Jacksonville recently returned after an absence of six months. Dr. Morris has been doing post-graduate work in the University of Pennsylvania and the Mayo Clinic, Rochester. Mrs. Morris has been visiting her parents in New Orleans.

\* \* \*

Dr. D. G. Humphreys, Jr., who recently graduated from the Johns Hopkins Medical School, has become permanently associated with the Riverside Hospital of Jacksonville.

\* \* \*

Dr. Wm. J. Buck, formerly of West Palm Beach but now located at Belle Glade, has received numerous commendations for his relief work in the Palm Beach district during the recent hurricane. It is stated in the first reports that efforts will be made to secure a congressional medal for bravery for Dr. Buck in recognition of the work he has done.

\* \* \*

Dr. J. A. Strickland and Dr. J. D. Peabody of St. Petersburg recently attended the Atlantic Coast Line Surgeons' meeting at Virginia Beach, Norfolk, Virginia.

\* \* \*

Dr. H. F. Watt of Ocala has recently returned after two weeks spent in New York City.

\* \* \*

Dr. H. D. Smith of Sanford spent some time during the month of August visiting in Alabama.

(Continued on page 218)



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Dr. Robert M. Harris, secretary of the Dade County Medical Society, has moved his offices to Suite 1001 Huntington Building, Miami.

\* \* \*

The members of the Lake County Medical Society met at the Magnolia Hotel, Leesburg, September 6th, for their regular monthly meeting. The Society was the guest of Dr. H. G. Holland of that city.

\* \* \*

The Infirmary of the Florida State College for Women has been reorganized with Dr. F. Clifton Moor as director and chief physician. The other members of the staff are: Dr. B. A. Wilkinson, X-ray; Dr. O. G. Kendrick, eye, ear, nose and throat, and Miss Helen Hunt, R. N., superintendent.

\* \* \*

Dr. Joseph C. Dunn has recently moved from Ft. Pierce to Sebring.

\* \* \*

Dr. L. M. Anderson of Lake City recently spent a ten days' enjoyable vacation as camp physician at the Girl Scouts' camp at Lake Immokalee.

\* \* \*

Dr. M. B. Herlong announces the removal of his offices to 211 St. James Building, Jacksonville.

\* \* \*

Dr. W. M. Rowlett of Tampa has been spending the last month hunting and fishing in Nova Scotia.

\* \* \*

Dr. Julius C. Davis of Quincy has resumed his practice after an illness of three months spent in Atlanta hospitals and western North Carolina.

\* \* \*

Drs. C. J. Heinberg, M. A. Lischkoff and W. C. Payne of Pensacola were the guests of the Escambia County Medical Society, August 29th, at Brewton, Ala. Dr. Lischkoff read a paper on "Common Ear Infections."

\* \* \*

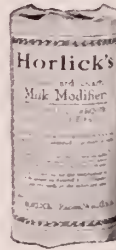
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(Continued on page 220)

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## C. J. WIIG

Dr. C. J. Wiig of Fort Lauderdale died at the Fort Lauderdale Memorial Hospital, August 4, 1928, of pneumonia following an operation for appendicitis. Dr. Wiig was born in Norway, September 21, 1864. He came to this country at the age of fifteen and settled in Minnesota. He attended Red Wing Seminary, Red Wing, Minnesota, from which he graduated in 1893. He entered the medical school of Hamline University at Minneapolis the same year and graduated in 1896. After his graduation, he entered the practice of medicine at Clinton, N. D. While there he founded Wiig's Hospital at Clinton, N. D., and St. Johns hospital at Kenmore, N. D. He moved to Wahpeton, N. D., in 1916 and helped in the reorganization and rebuilding of the Wahpeton Hospital, where, until he moved to Fort Lauderdale, he was chief surgeon.

Dr. Wiig was a tireless student and during his medical career took many post-graduate courses in the large American medical centers. In 1907, he visited the European clinics and took special work in surgery in Berlin.

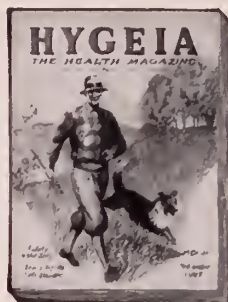
He was a member in good standing of the Broward County Medical Society, Florida Medical Association, a Fellow of the American Medical Association and the American College of Surgeons. He was also affiliated with a number of the fraternal organizations, the Masons, Scottish Rite, Shrine, Phi Rho Sigma, Elks, Odd Fellows and Sons of Norway.

Dr. Wiig had been spending his winters in Florida for many years. In 1925, he decided to make this State his home and in October of that year located in Fort Lauderdale where he was in active practice until his death. Since his residence in Fort Lauderdale he has been active in civic and medical problems. His standing in the profession has been very high. He was president of the staff of the Fort Lauderdale Memorial Hospital and a member of the Board of Censors of the Broward County Medical Society.

Dr. Wiig was married to Miss Emma Cammerud in 1900. He was the father of four sons, and his first interest has been to see them through college. Two of his sons are now medical students.

LEIGH F. ROBINSON, M.D.,  
*Necrologist.*

(Continued on page 222)



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## FRANK C. ZOLL

Frank C. Zoll, born at Warrensburg, Missouri, January 26, 1870, died on June 16, 1928. His death was due to blood poisoning, contracted while attending a patient.

Dr. Zoll attended Barnes Medical College from which he graduated in 1893 and to which he returned for post-graduate work in 1899. He also attended the Post-Graduate Medical School of Chicago in 1911. From his graduation until 1915, Dr. Zoll practiced his profession in the states of Missouri and Nebraska. He then came to Florida with the intention of giving up his practice and of spending his remaining years quietly in this state. However, with the outbreak of the World War, he offered his services to the government but was rejected because of his age. It was then that he again took up the practice of medicine in order that a younger man might be relieved and go to war in his stead. From that time until his death he practiced his profession in McIntosh where he was highly esteemed and where he left a host of friends to mourn his passing.

H. C. DOZIER, M. D., *Necrologist.*

## CLYDE BRADY

Dr. Clyde Brady was born in Jackson County, Ohio, March 20, 1882. He attended the Kentucky School of Medicine at Louisville from which he graduated in 1904. He practiced medicine at Ashland and Irvine, Kentucky, until he went into the Government service in 1905 and was sent to Panama during the building of the canal.

In 1908, Dr. Brady returned to the United States and the same year was married to Miss Lorena Hafendorfer of Louisville, Ky. In 1915, he moved with his family to Leesburg, where he practiced his profession until his death, July 2nd, 1928. He was commissioned a captain in the World War but Armistice was signed before he was called into active service.

Dr. Brady was a member of the Lake County Medical Society, the Florida Medical Association, which organization he was serving as councillor for the sixteenth district at the time of his death; and the American Medical Association. He was also a Mason and a Kiwanian.

Dr. Brady is survived by his widow, three children, Janet, Clyde, Jr., and Joy; his mother, as well as three brothers, Dr. Albert Brady of Greenup, Kentucky, Rev. C. W. Brady, Ironton, Ia., and Robert Brady of Oregon.

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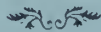
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## Florida Medical Association, Inc.

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### CONTENTS

PAGE	PAGE
Scleroderma, With Report and Presentation of Patient With a Generalized Type of the Disease.... 241 <i>James Martin Anderson, M.D., Lake Wales.</i>	Case Report of Impacted Ureteral Calculus..... 253 <i>E. S. Gilmer, M.D., Tampa.</i>
Gas Anesthesia ..... 243 <i>W. E. Van Landingham, M.D., West Palm Beach.</i>	Some Experiences in the Treatment With X-Ray of Uterine Fibroids Associated With Hemorrhage... 254 <i>A. C. Ives, M.D., Tampa.</i>
Bronchoscopy as an Aid in Diagnosing and Treating Intratracheal and Bronchial Conditions..... 246 <i>G. E. Chandler, M.D., Miami.</i>	Double Pregnancy—One in Utero and One in Right Tube ..... 255 <i>T. M. McDuffee, M.D., Manatee.</i>
Diseases of the Heart..... 248 <i>W. C. Box, M.D., Graceville.</i>	The Normal Relations of Psychiatry to the General Practice of Medicine and Surgery..... 256 <i>G. H. Benton, M.D., F.A.C.P., Coral Gables.</i>
The Lamed Bowel ..... 250 <i>L. L. Andrews, M.D., Orlando.</i>	Editorials: (1) The Annual Meeting; (2) Pellagra in Man and Black Tongue in Dogs Found to be Due to Similar Cause..... 259-261
Trench Mouth ..... 251 <i>J. W. Mitchell, M.D., Sebring.</i>	State News Items..... 261-270
	Schedule of Meetings—Component Societies..... 263

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*From a paper read before the Southport Division of the British Medical Assn., March 30, 1928. (British Med. Jour., July 14, 1928)*



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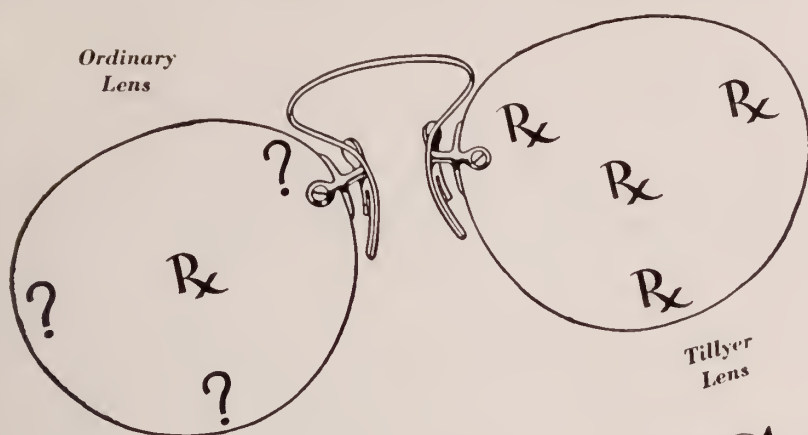
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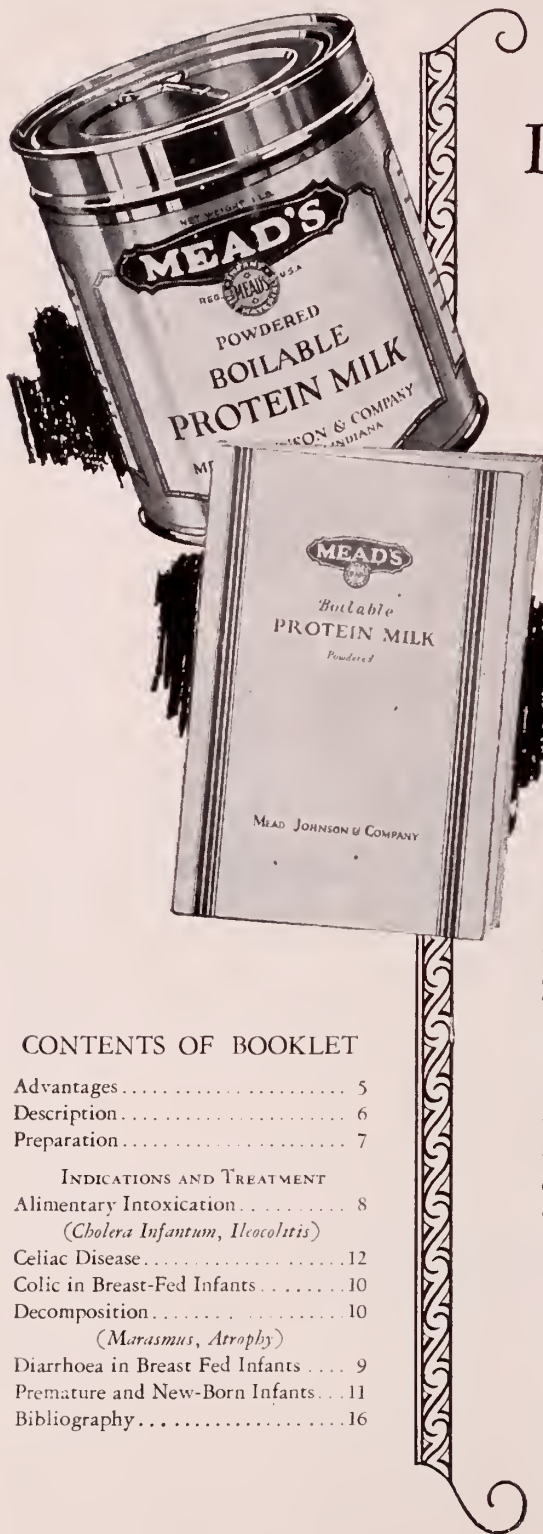
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### CONTENTS OF BOOKLET

Advantages.....	5
Description.....	6
Preparation.....	7
INDICATIONS AND TREATMENT	
Alimentary Intoxication.....	8
<i>(Cholera Infantum, Illeocolitis)</i>	
Celiac Disease.....	12
Colic in Breast-Fed Infants.....	10
Decomposition.....	10
<i>(Marasmus, Atrophy)</i>	
Diarrhoea in Breast Fed Infants....	9
Premature and New-Born Infants....	11
Bibliography.....	16

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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

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Number 5

## SCLERODERMA WITH REPORT AND PRESENTATION OF PATIENT WITH A GENERALIZED TYPE OF THE DISEASE\*

JAMES MARTIN ANDERSON, M.D.,  
Lake Wales.

In bringing this subject before the members of this association I do so more with a feeling that I am a wanderer in the desert seeking guidance than that I may be able to add anything to the knowledge of this association.

As the notice that I had been given a place on the program, by your scientific committee, went astray in the mails I had no knowledge that I had been given a place until I saw the program in the Florida Journal just a few days ago. I will make no attempt at presenting a scientific paper but just a brief history and the patient for your observation.

I have known the parents of this girl for twenty-five years, being their physician most of the time for past eighteen years. The fact that nine children have been born to this union, all living without a blemish that would cast any light on this condition of patient, and Wassermann being negative in all three, would make family history negative beyond question.

The patient came to me in February of 1927 with about the following history:

Miss R. K. Age 19, height 5 ft. 5 in., weight 125 lbs.

*Past History.*—Had measles, mumps and whooping cough all before the age of nine. None of these left any complication except the measles left her eyes very defective and she had to have her glasses changed frequently in order to be able to keep up her school work.

Her menses came on at twelve, normal, and gave her no trouble. In fact she was, to my knowledge, an unusually healthy girl up to onset of this disease.

The onset of this trouble was preceded in the late summer of 1926 by an attack of malaria which recurred two or three times but did not differ from the prevailing type in that locality at the time.

In the early fall of 1926 she noticed a swelling of hands and feet, very rapidly spreading to every part of body. This gave no pain and did not seem to be dropsical in character and did not pit on pressure. Physician was called and several urinalyses were made without locating trouble. Physical examination did not show heart trouble. A tentative diagnosis of rheumatism was made and was so treated for some time. She started to teach school and soon found that there was some limitation in motion of ankles, knees and elbows. This condition continued to grow worse and she found it difficult to get up and down steps. She finally gave up her school work and came into my hands as before stated.

Inspection at this time showed that she had definitely passed from the edematous stage to the sclerotic stage of the disease. The skin had that hard, board feeling that made me think of the so-called petrified people I had seen, in my boyhood days, in the side shows.

The muscles under skin were involved and firmly attached to the skin. The skin had a glazed shiney appearance with brown spots scattered over the surface. Further inspection revealed that muscles and skin of back, chest and abdomen were also involved but in a very much milder degree than the limbs.

Physical examination revealed no abnormality other than revealed on inspection. Blood test revealed nothing other than a very slight lowering of red blood count and a 10% eosinophilia. Her stools, urine and kidney function test were normal. Her basal metabolism was normal.

I had never seen or heard of anything like it and I was up against a proposition to make a diagnosis. After searching much literature on the subject I ran across a typical description of this case by Lewin and Heller of Berlin, Germany, in Stelwagon's treatise on diseases of skin. Just a few days after this I received a letter from Dr. G. H. Warren of Perry, with the same diagnosis. I wish to say here that I am very grateful to both Dr. Warren of Perry and Dr. Wahl of Thomasville, Ga., as both of these have given this case their careful attention and had charge of case before it came to me and have treated it while on visit since that time. I knew

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.

then that my diagnosis was right, but what was I going to do about it? After one year on this case I am still asking this same troublesome question.

Through the Pryor Three-Fold Unit Service I have collected most of the literature of the world on this subject trying to find an answer, but to date I have found none.

I find but little on the subject by American physicians, in fact, a form letter to most of our institutes doing research work has brought the reply that no research work had been done on this disease.

After reading Rowe, Allan, McCrudden, Swarz, Curt, Hoffman and Rothacer on this subject, I find them in practical agreement on one thing and that is that the disease is primarily of endocrine origin. Perhaps at first just some one gland gets out of balance, thereby administering a shock to the endocrine system as a whole. This theory seems to be borne out in a measure by what few post-mortem examinations have been made. In some, the thyroid shows great structural changes with other glands showing only slight changes; in others, will be found structural changes in ovaries, pituitary or suprarenal gland and only slight change in other glands.

As to treatment, will state that I have tried almost all the treatments that have seemed to benefit other cases, with negative results. Basal metabolism being normal there would seem no need of thyroid treatment; however, she has had thyroid treatment for quite some time. The treatment as outlined at Johns Hopkins was and is being tried at this time.

Here is the only thing of any importance that has happened during the treatment. While giving her the pituitary and ovarian substance she would sometimes send to me for some ovacoid tablets that she thought would help her at her period time. At one of these times I gave her a bottle of what I thought were ovacoid tablets out of my case. Up to this time she had been very melancholic; seemed to worry a great part of her time about what might have been. She had struggled hard for an education and just as she had equipped herself to help in support of family was prevented from doing so. She cried a great deal and took a gloomy view of life in general. In just a few days her whole disposition changed, she became more cheerful, would

meet me with a smile and really took on a hopeful disposition. I instructed her to keep on these tablets and thought I had just gotten her on a really potent preparation of the ovary substance. I soon discovered I had made a mistake and she was really taking the testicoid tablets. Without saying anything to any one I switched her to the ovacoid tablets and in just a few days she became despondent and had melancholia again. I put her back on the testicoids and she again became bright and cheerful, would go about places with family and seemed to enjoy herself. Whether on account of her taking more exercise or some other cause, I do not know, but there was a pronounced softening in the elbows and around the knees.

At this stage of her trouble she went on a visit to Perry, and was under treatment by Dr. Warren and Dr. Wahl as before mentioned. This part of treatment seemed so ridiculous that I did not write them about it when I sent her away. As to the reason this seemingly helped I can only say that it is beyond my comprehension and in meantime would appeal for any helpful suggestions from the profession.\*

#### DISCUSSION.

*Dr. C. A. Andrews, Tampa:*

I do not think there is any doubt of this diagnosis; it is a typical case I think, and it is just an outward manifestation of an internal disorder. The symptoms are outlined in any text.

In most of these cases there are nervous manifestations and pains and this process exists for weeks and months until you get this stony condition of the skin, as you see in this individual.

In regard to the etiology of the disease, the cause is not known; and before you reach a proper diagnosis the case will require a great deal of study.

As to treatment this is usually mild for local treatment, and you have to give internal treatment for a case of this kind if you are to get any benefit. In the prognosis the only thing you know is that it is a progressive fatal disease, and we cannot tell you how it will continue before death terminates it.

*Dr. J. L. Kirby-Smith, Jacksonville:*

I think we owe Dr. Anderson a vote of thanks for the unusual opportunity of seeing this extremely rare case. I don't think for a moment

\*This was the condition when she left Sears to visit Perry. While in Perry Dr. Warren had Dr. Wahl do considerable blood chemistry and there were practically no changes from the examinations before reported.

that anyone can possibly dispute the diagnosis or that there can be any remedy for the disease as I understand the situation. These conditions are extremely rare. I frankly admit that over a period of twenty years I have seen only one case of generalized scleroderma. It is not unusual to see localized patches of scleroderma in the skin, over the ankles, for instance, but to find it in both arms and extending over the body this generalized scleroderma condition of the skin is quite unusual. As to the etiology of the disease it is a question for the endocrinologist and the neurologist. Scleroderma is a retrogressive progress; the nerves have been partly obliterated and all the skin elements have been destroyed. Considering the progress of the disease the prognosis in this unfortunate patient is very serious for a fatal determination a question possibly less than a year. As to the treatment in this particular case the trial of gland extracts, especially the thyroid, may be of some benefit.

#### ADDENDA.

When she returned she was in the condition viewed at Tampa as she was returning to Sears and came by Tampa that she might be there before the Association. She was back in that melancholic state of mind. From her ankles to her knees she had gangrenous sloughs, some more than two inches in diameter, and looked as though she would develop a Raynaud condition that would perhaps cause a sloughing of both lower extremities. This was the gloomy outlook I had to face when we arrived in Sears. The condition was too alarming to depend on any one thing. I put her back on testicoids but also gave her sulpharsphenamine as suggested by Dr. Kirby-Smith. I kept the sloughing parts bandaged with a weak solution of iodine in olive oil. Notwithstanding that it would have seemed impossible for skin to have undergone any regeneration after it had been so sclerosed that it had squeezed off all circulation and allowed it to die while the rest was very poorly nourished; yet that is what happened. I have never seen any wounds of equal size heal faster than they did. In two weeks' time all denuded parts were covered with skin but it was sclerosed just like what was left.

She returned to her cheerful state of mind and was seemingly getting along fine until she was bitten by some mosquitoes one night. The bites were confined to the feet but the inflammation that followed was not. There were redness and blistering on other parts of body. This pro-

duced a systemic reaction and she ran a temperature of 101 to 104 for two days. Then we had same condition viewed at Tampa only much more defused. Same treatment brought the condition under control again and on inquiry found mosquito bites were perhaps the cause of condition seen at Tampa.

In conclusion would not say that mosquito might be a cause of the disease but know he is a bad pest to have around while treating a case. I am satisfied that in some way the poison from his bite was responsible for the reactions, both local and systemic and not as both the gentlemen who discussed my paper and myself thought at the time, a beginning of the end. With heart function perfect, with kidneys normal, digestion good and the skin showing ability to cover such large denuded areas in short time I would predict that she will perhaps live a good deal longer than any of us would have predicted in Tampa.

---

#### GAS ANESTHESIA

W. E. VAN LANDINGHAM, M.D.,  
West Palm Beach.

Every anesthetist must be intensely interested in life, in those chemical and physical conditions which regulate the mysterious changes which are characteristic of living processes. His daily task ever confronts him with many of the most baffling phenomena which man seeks to interpret and explain. More than this he is called upon to control, to regulate those processes which he does not understand. New discoveries are going on at a prodigious rate today. We need to be broad readers in the fields, especially of the natural sciences, to be able to apply these discoveries to our own work and to the good of mankind. Anesthesia is no longer merely an art, but essentially an experimental science—an application of chemistry, of physics, of physiology, of pharmacology, of biology—an instrument in the management of pathology for the restoration of health and physiological processes.

In the selection of the anesthetic or combination of anesthetics for operations we should consider: first, the safety and comfort of the patient, including pleasantness of induction, freedom from disagreeable or dangerous sequelæ and the effects of the various anesthetic agents upon the vital functions of the body; second, the skill and experience of the anesthetist with the different anesthetics; third, the degree of relaxation re-



quired by the surgeon, and, fourth, the expense.

The ideal anesthetic does not exist. If it did, it would be free from danger no matter in what dosage given, have a short and pleasant induction uncomplicated by the stimulation of the secretory glands of the respiratory tract, produce no injurious effects on any body function, furnish muscular relaxation when desired, followed by no disagreeable or serious after effects, be inexpensive, require no special apparatus and could be satisfactorily administered by anyone without training.

In the absence of the anesthetic having these desirable qualities, it will be necessary to make our selection from the four anesthetics available, namely, ethyl chloride, chloroform, ether, and nitrous oxid-oxygen.

Ethyl chloride is a circulatory depressent and on account of its volatile nature is not suitable for continuous anesthesia.

Chloroform has many advantages, but it also is a marked circulatory depressent and is not infrequently followed by serious metabolic disturbances; its use has been discarded by most anesthetists in the field of general surgery.

Ether has the advantage of not being a marked circulatory depressent, unless administered in excessive dosage or over a long period of time. As it is slow in its action it has a wider margin of safety than any of the other anesthetics, and is, therefore, the safest anesthetic in the hands of the novice. However, it has many serious drawbacks as it has a disagreeable odor, is an irritant to the respiratory mucous membranes, so that the excessive quantity of mucous and saliva is sometimes a serious complication during its administration; it is a lipoid solvent; in some cases metabolism is considerably interfered with; it increases the clotting time of the blood; it has a deleterious effect on the kidneys, especially if they are diseased, in some cases causing complete urinary suppression. In some instances post-operative nausea and vomiting, acidosis, or lung complications are serious sequelæ.

Nitrous oxid-oxygen comes the nearest to being the ideal anesthetic. There are many known advantages of nitrous oxid over ether. It is pleasant for the patient to inhale. The induction period is short and when expertly handled this period is devoid of unpleasant sensations. It is followed by less nausea and vomiting and post-operative asthenia, which decreases the convalescent period. More important than the above are the more subtle and often

unobserved characteristics possessed by ether, which explain part of the unexpected post-operative morbidity and mortality in cases upon which it has been used. These advantages are of a physiological and biochemic nature.

While this paper is not in any measure an attempt to teach anesthesia it would go unfinished if certain points of advantage and value were not incorporated. By this, we mean that in the preparation of the patient for operation we have found it advisable to give only codeine hypodermically instead of morphine. Never atropine. Under this method we lessen the chance of nausea and vomiting after operation principally; we do not get the pin-point pupil which is present in some cases after morphine, and thus preserve one of our guide posts in the journey through anesthesia. Occasionally, when a patient has received a large dose of morphine, the pupils do not dilate until respirations have become arrested or are about to become so, therefore, close attention should be given to the character of respiration, and to the pulse rate, which usually becomes slower than normal as the profound zone is approached.

Atropine is objectionable; it dilates the pupil, it accelerates the pulse to sometimes a very rapid rate; a bright red flush may appear on the face and extend over the entire body; complete muscular relaxation and death has been caused by asphyxia combined with cardiac failure.

Since we can interpret the reactions of the nervous system only through muscular responses, we must center our attention upon the muscular phenomena as the only true guides we possess in anesthesia, therefore, we administer only sufficient gas to bring about the muscular rolling if you please, with even continuation until the point of anesthesia is reached when the balance wheel (if I may so term the eyeball), returns to the center. There is a saying that "the love that lies in a woman's eye, and lies and lies and lies", may be true, but the signs that lay in a person's eye during anesthesia never lie, if certain precautions are taken. It is obvious that no single definite symptom can be absolutely depended upon, yet, the eye with its conjunctival, pupillary and corneal reflexes to the various stages of anesthesia, give the anesthetist sufficient warning signs to heed and observe. If kept at this point—slightly rolling and reacting, with no dilatation or discoloring of the skin, then we have sufficient relaxation to justify any operative procedure for which we selected our anesthetic. To

see our patient come out promptly—no dehydration, less shock, pleasant memories and calm, without vomiting, is more of a life-saving measure than is at present realized.

In conclusion I plead a hastening of the day when the attitude of the surgeon will take cognizance of the qualifications of the anesthetist and if he believes that the duties of the anesthetist consist in something more than the administration of the anesthetic; that aside from being able to perform this important duty, he should be sufficiently qualified and trained to accurately diagnose the condition of the patient, which in serious operations may be constantly changing, realizing that the anesthetist is the only member of the operating team who is so situated that he can obtain this valuable information; he is usually a surgeon who is doing all in his power to educate the patient to the value of this kind of service in order to attract those with the right qualifications into the specialty of anesthesia, and to hold those already in the field. The surgeon who takes this attitude and the patient who backs him up are helping to minimize the dangers of anesthesia by producing better qualified anesthetists, which is especially desirable for the administration of gas-oxygen. Not only is the safety of the patient increased as regards the anesthetic point of view but from that of the surgical as well.

#### DISCUSSION.

*Dr. John E. Hall, West Palm Beach:*

Dr. Van Landingham has given us a very excellent paper, dealing with this all-important subject of anesthesia, but he touched too lightly certain phases of the subject, namely: the necessity for using nothing but expert anesthetists, and remuneration commensurate with their services.

When one takes into consideration that an anesthetic improperly administered is a dangerous thing, and that serious secondary consequences may result long after its administration, one should exercise more care in the selection of his anesthetist.

From a remunerative standpoint, anesthesia is about the poorest specialty a physician may select, since the tendency amongst surgeons seems to be, to pay as little as possible for this valuable service, and to employ internes to give anesthetics, rather than to call in an expert anesthetist and pay him a commensurate fee. This attitude is justified by assuming that the patient is not able to pay but a small amount for this

service. However, most patients are more than willing to pay for an expert's service in this line, since the majority have a horror of taking an anesthetic, being fearful of not surviving it.

It is just as essential for the patient's welfare that he, or she, should have an expert anesthetist administer the anesthetic, as it is to have a competent surgeon to perform the operation.

The surgeon is not able to give sufficient attention to the patient's condition while operating, and as he is responsible both morally and legally for the outcome, it behooves him to use an experienced anesthetist.

Ether is probably as near fool-proof as an anesthetic agent may be, and is the one most generally used throughout this country, but as pointed out by Dr. Van Landingham, it is not without its dangers. Especially is this true where used on patients suffering from diabetes, chronic prostatitis and in liver conditions, in which jaundice is an associated symptom.

In diabetes, the acidosis is aggravated by the disturbing of metabolism of carbohydrates, and should not be used.

In jaundice, ether alters and depresses the functional activity of the liver, causing it to lose its protein detoxicating power and thereby throwing a greater burden on the kidneys.

Urologic surgeons avoid ether as much as possible, since they know that its administration not infrequently causes a marked reduction in the amount of urine excreted, but also at times complete anuria. Barbour and Bourne, of McGill University, believe that this decrease in the amount excreted, following ether administration, is due more to blood concentration than to direct effect produced upon the kidneys.

Haines and Milliken, of the University of Pennsylvania, think that the decrease is due to the fact that ether is a vasoconstrictor, and produces a temporary ischemia, depriving the organs of their normal blood supply, thus lessening the amount of excreted urine.

For prostatic surgery, nitrous oxide is perhaps the best anesthetic agent, except in those cases which have high blood pressure, and marked heart lesions. In such cases, spinal anesthesia is doubtless the safest form to use.

Dr. Van Landingham's plea that the surgeons may accord the anesthetist due recognition, and that they should utilize the services of those specially trained in this important branch of medicine, is well put.



# BRONCHOSCOPY AS AN AID IN DIAGNOSING AND TREATING INTRATRACHIAL AND BRONCHIAL CONDITIONS\*

G. E. CHANDLER, M.D.,

Miami.

Bronchoscopy constitutes a special field in medicine as an aid in conjunction with the internist and roentgenologist. It is only resorted to after the head and chest examination, X-ray and such laboratory reports are collected and duly weighed.

Out of consideration for your time and feelings I am writing briefly on pulmonary suppuration and just mentioning other conditions for bronchoscopic procedure.

At this time not a little discussion has been aroused as to the causative factor or factors in pulmonary abscess. No dissention from the three modes of infection is found, namely lymphatic extension, blood stream infection and aspiration.

Lymphatic extension is generally considered rare mode of pulmonary infection, but blood stream and aspiration are much debated.

Dr. Moore, after analysis of 202 cases which showed the lower lobes were more often involved, 41% right, 19% left, thought it justifiable to assume that the infection had followed the same route as for aspirated foreign bodies which show by Dr. Jackson in their localization approximately these same percentages. Articles by Fetterolf and Fox state, the lower lobes are the ones most commonly affected from a blood stream infection. Their contention is, however, that infarction takes place, of which one of the cardinal symptoms is expectoration of bright red blood. It is an undisputed fact that the vast majority of post-operative cases of pulmonary abscess, follow operations about the upper respiratory tract.

The same conditions pertain to any surgical procedure about the body, especially salpingitis, appendicitis, abortions and gall-bladder infections, as far as the blood stream is concerned.

The treatment of suppurative conditions of the lungs has been attempted in many ways. These conditions as in the case of many other ailments to which mankind is subject, either progress to spontaneous recovery due to factors chief among which is, the fortunate rupture of the affected

area in a bronchus open enough to drain the abscess, or these conditions become chronic with definite involvement of a portion of the lung lobe surrounded by an area of edematous lung tissue; "sponge soaked" describes the tissue immediately around the abscess.

Some of the treatments advocated for this condition include:

1. Confinement to bed for long periods of time, with abundant diet.
2. Vaccine treatment.
3. Bronchoscopic aspiration or installation of drugs.
4. Surgical procedure as:
  - (a) Artificial pneumothorax.
  - (b) Phrenectomy.
  - (c) Ligation of pulmonary artery.
  - (d) Lobectomy.

Bronchoscopic treatment has now progressed to such a point that hope can be held out to the patient of a permanent cure when there is not a generalized bronchiectasis. In any case, the patient has lost nothing through delay while undergoing bronchoscopic treatment, and indeed a localization or a limitation, or both, may influence for good the end result. Moreover, he has incurred practically no risk by bronchoscopic treatment.

Therefore, when a patient with pulmonary suppuration presents himself or herself the following must be done:

The chest findings are ascertained by an internist, who also makes a study of the patient for organic disease after which the patient is referred for roentgen ray examination. Tuberculosis is excluded so far as possible by usual diagnostic means; with all this information at hand it now becomes a question whether or not the case is one for diagnostic bronchoscopy.

This preliminary work is necessary not because the bronchoscopic procedure is in any way dangerous, in a fit subject, but to be sure there is not some other complication as empyema which is one contraindication to bronchoscopy. The pleural cavity cannot be drained by oral bronchoscopy.

With abscess localized so far as possible, on inserting the bronchoscope, two points are to be observed; first, the bronchus or bronchi from which suppurative products are exuding; second, the presence of any factor which would constrict the lumen of the branches and inhibit free drainage.

\*Read before the regular meeting of the Dade County Medical Society, Miami, October 7, 1927.



At the examination uncontaminated specimens of the secretion are taken either by swab or by aspirating into a specially devised tube, which can be sent to the laboratory at once.

Fresh vaccines are made and used twice a week for not longer than two months when you repeat the procedure and make fresh. These vaccines work like all vaccines—sometimes yes and sometimes no.

Patients are never confined to bed except in case of fever or weakness and when in bed asked to lie with affected side up to facilitate drainage.

Drugs are injected through the bronchoscope at times and the procedure is repeated at seven-day intervals.

Infection is not spread in the lung by this treatment. Obstructive granulations are removed if preventing good drainage, but usually disappear themselves after purulent accumulations are removed by bronchoscopic aspirations.

Results in Dr. Jackson's clinic including those complicated with bronchiectasis in percentage is as follows: 21.4% cured, 57.2% improved and some of these in time probably cured, unimproved 21.4%. Those cured were pronounced so only after prolonged cessation of symptoms and X-ray studies. The patients are very happy to have this done as it lessens their persistent cough and foul expectoration. Therefore, indications for bronchoscopy are:

- (1) In any patient in general good condition with not too extensively diseased lung.
- (2) In any case in which the internist desires the aid of aspiration as an addition to his general care.

#### *Contraindications:*

- (1) In cases of recent profuse hemorrhages.
- (2) In very extensive diseases of the lung tissue, involving  $\frac{1}{2}$  or more of one lung.
- (3) In organic diseases of the heart and vessels.
- (4) In laryngeal tuberculosis.

#### *Bronchoscopy is advisable in:*

Bronchial asthma.  
Foreign bodies opaque and non-opaque.  
Hemorrhages.  
Diagnosis of pulmonary carcinoma.  
Bronchiectasis.  
Post-operative collapse of a lung due to plugging by thick tenacious mucus.

A word about X-ray: flat, stero and lateral views are all very essential; something is to be gained from each. Therefore, don't expect some

small bedside machine to give all this data. A few of these cases have fever and weakness necessitating rest in bed, the majority are ambulatory and can go to a well-equipped office. You are interested in finding the cause if possible as well as the location.

A non-opaque foreign body plugging a bronchus may act as a valve; air will be taken into the bronchus and not exhaled, giving an emphysematous area, which is a clue. This is done by making one film on full inspiration and another on full expiration. By comparing films a more accurate diagnosis is made.

Now for the bronchoscopic procedure, patients might feel that it is a terrible ordeal to go through, but they can be reassured by telling them they never have to take a general anesthetic; it is performed with local anesthesia in adults, and small doses of morphine in children and as a matter of fact they come off the table smiling and say they did not mind it.

Little children will walk to the table and climb up to go through with their treatment, though knowing exactly what to expect. It is no more of an ordeal than having a tooth filled by a dentist and does not last nearly as long.

#### **DISCUSSION.**

*Dr. M. J. Flipse, Miami:*

This paper is too good to allow it to pass without discussion, and I want to compliment Dr. Chandler very highly. The question of lesions in the thoracic cavity such as abscess, bronchiectasis and ulceration of the bronchial tubes, is one that has puzzled the internist for a considerable length of time. Surgery has practically nothing to offer in the way of a cure when the lesions are near the tubes and until bronchoscopy was used, the doctor had very little to offer his patients. I have seen several of these cases which would have been benefited at an earlier period by bronchoscopy. Unfortunately at the time they were seen, they were in the terminal stages. One, a large abscess ruptured into the pleural cavity with the production of a severe empyema. The lower lobe was so severely damaged that it was no longer possible to use the measures Dr. Chandler has described. This patient was turned over to the surgeons for a lobectomy, and a thoracoplasty was done to compress the lower lobe. As many of these cases do, this patient developed metastatic abscesses and died from abscess of the brain before the lobe could be excised.

These cases usually give a history of very long standing. Some are mistaken for tuberculosis, and the patient ordinarily says he has had no relief from any treatment.

The work of Dr. Jackson on the treatment of these cases I think is one of the greatest pieces of work done in the treatment of diseases of the chest in recent years.

It is always beneficial to remember that when a patient comes to us with a history of lung trouble for a long time, and no tuberculosis organisms have ever been isolated, we should think that bronchiectasis or lung abscess may be the true state of affairs. Unfortunately simple stereoscopic or flat films give comparatively little information of value. It is often necessary to inject the tubes with lipiodol or some other opaque medium to outline the bronchi so that a proper diagnosis can be made.

#### DISEASES OF THE HEART\*

W. C. Box, M.D.,  
Graceville.

In selecting the subject for this evening's paper, I do not anticipate that I can add anything to your knowledge of the subject, but in going over some of the things we already know, perhaps our minds will be stimulated and we will be better equipped to handle some of the problems that daily confront us.

Because of the inaccessibility to the instruments of precision in diagnosis such as the electro-cardiograph and polygraph that are used in the large clinics, we country doctors are forced to rely on clinical evidence and the knowledge gained from percussion, auscultation and palpation for our diagnoses. It is easy to see that a man, who is short of breath, edematous and cyanotic, is a cardiac, but we should go a step further and endeavor to diagnose the pathological condition present so that intelligent treatment may be instituted.

Broadly speaking, there are two causes of heart disease—infectious and arteriosclerotic. Of the infectious type, the rheumatic heart comes first in importance. This affection attacks the endocardium and cripples the heart by causing valve deformities, especially of the mitral valve.

*Endocarditis.*—This may be divided in to simple and rheumatic. Simple endocarditis is relatively rare, and is usually valvular in type

or limited to the valves. It may occur in chronic nephritis and some of the cachexias. It is rarely diagnosed before serious damage has been done. Rheumatic endocarditis is the commonest as well as the most important type of endocarditis. It is this complication that makes rheumatism the dreadful disease that it is, and the failure to recognize this fact by the doctor too often leads to direful consequences. Rheumatic fever in children is nearly always accompanied by endocarditis. The causative agent has as yet remained in obscurity. Some say one thing, some another. In reality no one has ever demonstrated the germ or virus at whose door the fault can be laid. Whatever it is, it seems to have a preference for the leaflets of the valves, causing vegetations to be formed on them with subsequent scar formation and deformities. It is maintained by some authorities that it is a streptococcus infection; whether they are right I do not know. Certainly it seems that both rheumatic fever and chorea, with the attending endocarditis has some relation to such foci of infection as diseased tonsils, gall-bladders, etc.

For purposes of treatment it is not necessary that a diagnosis of endocarditis be made from the evidence obtained from an examination of the heart. It should be considered as present in all cases of rheumatic fever and the treatment is that of rheumatism; namely the administration of the salicylates and complete and prolonged rest in bed—and the removal of any demonstrable focus of infection. Streptococci vaccine has been recommended, but no protein therapy should be undertaken without intelligent consideration, because of the danger of reactivating a valvular infection.

I will not discuss subacute or chronic bacterial endocarditis because of the hopeless outlook for the patient afflicted with it and the extreme difficulty experienced in making the diagnosis, it being practically impossible to do so without a blood culture.

Gonorrheal endocarditis is sometimes met with and is recognized by its accompanying gonorrheal arthritis, or urethritis. It is usually fatal.

*Heart Failure.*—I imagine that the general practitioner sees as many cases of heart failure in varying degrees of severity as of any other one malady. The causes come under two classifications—infectious endocarditis, and myocardial degeneracy from arteriosclerotic changes.

\*Read before the Jackson County Medical Society, November 8, 1927.

Under the first all causes of heart failure resulting from acute endocarditis and its resulting valve deformities fall, and under the latter all so-called hypertensive diseases fall. By heart failure we mean the inability of the heart to efficiently perform its work. Of course I understand that this broad definition is not accepted by everyone, but I shall accept it for the purposes of this paper. There is a difference in heart failure and circulatory failure; circulatory failure is usually accompanied by heart failure, but it may be caused by conditions in the blood vessels, vasa motor mechanism, or the lungs. Heart failure is usually secondary to an infection, either in the heart itself or in some other part of the body and the effect of its toxins on the heart muscles. In making a diagnosis of heart failure, one should first of all consider the history, and elicit from the patient whether or not his heart permitted him to do his usual work; whether he has had substernal pain, excessive fatigability, breathlessness, swelling of the ankles in the evening, etc. Usually, recurrent bronchitis in the aged, especially, means heart failure, and digitalis should be administered instead of the usual cold remedies.

A diagnosis of heart failure cannot be made from an examination of the heart itself. A heart may render all kinds of murmurs, and yet in no sense be a failing heart. These signs and murmurs elicited by examination taken in conjunction with other things such as breathlessness, condition of pulse, precordial and substernal pain, cyanosis, edema, etc., make up a diagnosis of a failing heart.

*Acute Heart Failure.*—There are two common causes of acute heart failure, acute heart disease and severe acute infection. A severe acute infection may attack the heart directly in which case its effects are disastrous. Most commonly it is the toxemia of an infection that attacks the heart muscle fibers, causing disintegrating changes. It is not hard to understand why a heart so affected would be unable to carry on its work.

In the presence of chronic heart disease there is usually some precipitating cause of acute heart failure, which may be over-exertion, overloading the stomach, an intercurrent infection, or a hundred other things. Nothing will cause more than a transitory failure of a healthy heart, except poisoning.

Then there is the attack of angina pectoris

caused either by a spasm of the coronary arteries, or a plugging of the coronary artery by a thrombus. This affection attacks the male sex about twice as often as the female, and Dr. Anders says in his cases the age averages about 49½ years. When an attack comes on there is intense pain about the mid-sternal and left parasternal regions, radiating down the left arm, or both arms. Of all the attacks of severe pain, I have ever been called to see, I think angina is the most agonizing. The attack coming on, after a meal, usually a heavy one, and the type of pain, which very often is in the epigastrium, gives rise to the prevalent idea of acute indigestion. I doubt if one has ever died of what is understood by the term "acute indigestion." One may have, and often does have acute ptomain poisoning, which is quite a different thing from the clinical picture called "acute indigestion."

*Treatment.*—The treatment of the heart diseases resolves itself into preventive and curative. Much can be done in a preventive way, if we will only remember that in all acute infections that the heart muscle suffers quite as much as any other muscle in the body, and inasmuch as the continuation of life is dependent on the uninterrupted action of the heart, we should do all in our power to shield it, by taking from it as much strain as possible. So in all acute illnesses the patient should be required to remain at rest until the attack is over. In rheumatism, especially, should the patient be put to bed for a prolonged rest.

In the treatment of the diseased, or failing heart, our efforts should be directed to the accompanying conditions as well as to the disease itself. In all failing hearts, there is more or less edema and congestion, which requires appropriate treatment. Complete and absolute rest in bed in as nearly a horizontal position as possible is essential. Dyspnea is always present and requires relief above all other things. In this, I've never found anything to do quite so well as morphia given in proper dosage. For the edema diuretics and saline purgatives are indicated when the kidneys are not involved, novasurol intravenously, or intramuscularly being the most efficient diuretic I have ever used. This should be given on alternate days until the edema is gone, or there is some indication of mercurial poisoning such as salivation or diarrhoea. Digitalis is the drug for the heart itself. Formerly, this drug was given in too small doses to get its most happy



effects. Eggleston has worked out a method of dosage which by allowing for elimination, digitalizes in a very short time.

I have found quinidin very valuable for correcting the irregular heart. I give three grains every 4 hours, increasing the dose to six grains if necessary. Frequently this drug will correct a failing heart when digitalis fails.

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#### THE LAMED BOWEL.\*

L. L. ANDREWS, M.D.,  
Orlando.

Life is a form with matter flowing through it. The form is varied to meet the exigencies of the type and scale of life.

The purpose is always the same, namely: To take the highly complex compound molecule of matter, reduce it to its constituent elements, then absorb these elements and by assimilation build them into its own cell structure—a highly complex molecule.

In the functioning of the cell its molecules are oxidized, energy released and the by-products of combustion of the particular molecule are eliminated as waste and poison; thus the chemical cycle is complete and life abundant and exuberant, rejoicing in the consciousness of achievement and volition, is the result. The Almighty God that spoke our system into existence is still sustaining it—chemical law reigns, and how beautiful and peaceful and joyful the life that obeys His mandate.

But it needs no seer, nor doctor, today to make known that life is anything but peaceful; that its efficiency is twenty to fifty per cent below par and that pain and sickness and turmoil of body and soul are the common lot of man. Think of it as we may, regret it as we must, strive to relieve it as we do, there is but *one* answer to this ever-increasing, stupendous problem—this problem that is so world-wide that it is the rare exception to find a well person—namely, chemical and biologic laws have been and are being violated.

This violation of law leaves its mark in every tissue of the body, but especially is it felt in that structure, the bowel, specifically designed by its Maker, to transmute the raw intake into the living, conscious entity called *yourself*, and so terrible is this breakdown and so far-reaching the

consequences in the myriad activities and faculties of man, that we do well to pause and consider intently the problem of the lamed bowel which has become almost universally the heritage of man.

This highly organized and specialized tissue is a structure of some thirty to thirty-five feet in length. It is a chemical laboratory of marvelous and wonderful capacity, yet so nicely adjusted in its function that emotional states of joy, of fear, of irritability accentuate its activity or paralyze its action. It is dominantly alkaline in its secretions, yet specifically acid in two of its sections, the stomach and the colon.

Its dominant purpose is to accept what is presented and make the best possible out of it, and so great is the margin of safety packed away in this specialized tissue with its highly developed glands, that it will stand a world of abuse and yet return with a smile to the service of its master. But time and forbearance will at last consume the margin of safety be it ever so great, and the master awakens to the consciousness that something is wrong. Instead of the joy and the satisfaction normal to the intake of proper food, there is the distress and the pain and the turmoil of the thunderings of borborygmus, or the anorexia and emesis and dire foreboding of gastric or duodenal neoplasm, or that mental disturbance ranging from irritability to melancholy and epilepsy which are so much more conveniently spoken of in the conventional terms of constipation and auto-intoxication, but which are in reality self-poisoning and plain internal uncleanness. We need but to step into the presence of such a sufferer to recognize the terrible havoc that has been wrought in the wonderful laboratory God gave him to keep in order. His fetid breath speaks his delinquencies and his poisoned life to high heaven. We may cloak the situation to our patient with the smooth phraseology of Colitis with ptosis and adhesions, but we ourselves know, or should know, that he has received an irreparable damage. Nature will demand her "pound of flesh" for the violation of her chemical laws of intake and elimination.

In a thousand ways will she plague the life of him who so lightly regards the home in which he lives and does despite to the fiat of his Maker, regarding the character of the intake which should constitute his daily food. That pronouncement has never been revoked and it is as true today as when first spoken. If we would

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\*Read before the Florida Midland Medical Society, Lakeland, November 3, 1926.

fully and truly live our food must be the "herb of the field."

The lowered resistance due to the character of the continued faulty intake may manifest itself in the form of acute or chronic appendicitis, with their attendant sequella, or diverticula of the bowel may be developed constituting foci of infection feeding into the lymphatic circulation a continual stream of organisms which in time may so break down the functioning of the bowel that its partial or complete excision may become necessary.

Acute infections, as typhoid fever, pneumonia, influenza, the dysenteries of childhood, as well as of maturity; the protozoa and the vermes all take their toll of vitality and leave their mark of injury in the wearied bowel. The sequella of these destructive agencies on the intestinal tract can never fully be measured, but we can comprehend something of their awfulness in the marked lowered margin of safety in many of those who have been so unfortunate as to have been their victims.

How far the lamed bowel may retrieve itself is an entirely relative question. It all depends upon the margin of safety, the initial personal inheritance, the age of the patient, the length of time the offending agency has been endured and the character and severity of the lesions produced. When our biological and chemical laws are obeyed, vicious habits discontinued and foci of infection eliminated, and obedience to the laws of hygiene complied with, it is marvelous the comeback that nature manifests. It can be promised with all certainty that at least a measurable degree of comfort, and in all cases an amelioration of conditions, may be obtained in the treatment of this many-sided affliction. Intensive medication is of but little avail. The daily cathartic is to be greatly condemned; whatever eliminant may be selected, it should be such as will give the minimum amount of irritation adequate for results, to the already overwrought tissues of the bowel. Mineral oil, plain or emulsified form with Agar, if necessary, in conjunction with castor oil, or the bile salts, will frequently be most helpful in aiding in full elimination. The injection of mineral oil at bedtime and the use of a waste free diet in tonic spastic colitis will be found most helpful. The use of the moist heating abdominal girdle at night and the dry girdle in day will also afford much comfort to the patient.

Mechanotherapy, electrotherapy, heliotherapy, hydrotherapy are all most useful and powerful agencies in aiding to restore the greatly injured bowel to function again. Discriminating judgment and a thorough knowledge of the pathology present are essential in the effective use of these powerful agencies or great damage, rather than benefit, will result. But granting due merit to all these agencies and others worthy of mention, the one supreme factor that must be considered above all others, if success is to greatly attend the re-functioning of the lamed bowel, is the modifying of the intake to comply with the chemical and biological laws of life.

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### TRENCH MOUTH\*

J. W. MITCHELL, M.D.,  
Sebring.

Vincent's Angina was recognized as a distinct disease entity, long before the World War, but the occurrence, at this time, of extensive outbreaks in the trenches caused it to be designated as trench mouth, and resulted in the condition being given a prominent place in current medical literature.

I am convinced that this condition is certainly on the increase in our part of the country at the present time. It is frequently my experience, and I am sure the experience of others, to encounter one or more cases within a period of a week. This increase is perhaps the result of overcrowding, closed automobiles, public drinking places and the mild untreated and unsuspected case serving as a source of infection.

The bacteriology of the disease first described by Vincent as the spirochete and bacillus fusiformis, is well established and the organisms can be found in all lesions by examining a cover slip preparation. The bacteriology is interesting from the apparent duality of organisms involved. Just the relationship existing between the organisms, whether it is one of the symbiosis, and the role played by each in the infection would be interesting to know.

We meet with two well-defined clinical types—the mild and severe. I would classify all cases as mild which have only local involvement in the mouth or throat, and severe, all cases that have glandular involvement and other constitutional disturbances. The extent of the local involve-

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\*Read before the Florida Midland Medical Society, May 4, 1927.

ment does not determine the severity of the condition or rapidity of recovery under treatment, as there are cases with a diffuse membrane covering the oral, faucial and pharyngeal cavities with no seeming tendency to involvement of the submaxillary or lingual glands or other constitutional disturbances, whereas I have seen fairly small localized areas give origin to great glandular swelling and considerable constitutional disturbance.

In a very recent article in the American Medical Journal on this subject, Dr. Bloodgood makes the statement that in the very extensive cases there may be a fibrous exudate not unlike diphtheritic inflammation, but the diphtheritic type as a rule can be distinguished from diphtheria by the fact that, regardless of how diffuse the involvement or how extensive the ulceration the patient does not exhibit toxic symptoms. This statement is certainly at variance with my observation. Some few months past I was called to see an eleven-year-old boy. I found him to have a grayish membrane covering the right tonsil, uvula and a large patch on the right buccal mucous membrane, extensive swelling of the right submaxillary gland, temperature 104, pulse 130, and very toxic. The membrane peeled and bled beneath not unlike diphtheritic membrane. Three other physicians saw this case with me at this time and all four, after examining the case, concurred in a diagnosis of neglected diphtheria. This case received eighty thousand units of diphtheria antitoxin during a period of three days with no perceptible influence on the membrane or course of the disease. Cultures for diphtheria were negative. The boy died on the fifth day after I saw him, which was the twelfth day of his illness. The condition was not correctly diagnosed prior to his death. Immediately following this case I was called to see a robust young man thirty years of age, who gave a history of having been seen the previous day by a physician and a diagnosis of diphtheria made and twenty thousand units of diphtheria antitoxin administered. On examination I found him to have an extensive membranous involvement of the oral and faucial chambers, sufficient swelling of the submaxillary and lingual glands to produce such distortion of features that intimate friends failed to recognize him. He had pulse acceleration but no elevation of temperature and appeared very toxic and mentally depressed. I could not agree with

a diagnosis of diphtheria, but recognized the mouth and throat condition to be the same as my previous case and realized that I had not encountered cases like this before. With the assistance of another physician we searched the literature, and while we found reference to this condition very meagre, we made a diagnosis of trench mouth and confirmed it microscopically. Under treatment this case improved rapidly. Within a week the mouth and throat lesion had entirely cleared up and there was a subsidence of the glandular swelling, together with general improvement. But unfortunately, not being familiar with the condition, treatment at this stage was discontinued and two days later an extensive outbreak occurred in the oral cavity. I was, at this time, dismissed from the case and what subsequent course and treatment followed I do not know, but about one week later the patient died. Death in both the cases was largely due, I am convinced, to a toxemia accompanying the disease.

In a diagnosis of Vincent's disease it is necessary to distinguish it from a number of other conditions depending on the location and extent of the local lesion. Occurring in the mouth it would be necessary to distinguish catarrhal, aphthous and mercurial stomatitis, pre-cancerous lesions, leuko-plakia buccalis, scurvy, pyorrhea, etc. Occurring in the throat—diphtheria, follicular tonsillitis, syphilis, etc., would have to be distinguished. The condition begins always as a single red spot, irregular in outline, which, if untreated, rapidly becomes covered with a grayish patch. This single spot is the unit of the disease and the diffuse lesion is simply a coalescing of a multiplicity of individual spots. The membrane peels more easily than diphtheria and leaves a bleeding surface not unlike that disease. There is in many cases a peculiar fetid odor which may make a large room unpleasant to be in. In my experience there is no increase in the salivary flow, even with involvement of these glands. A positive diagnosis can, of course, only be made with the microscope in examining a smear. I believe that a well developed case with peculiar fetid odor once seen would never be mistaken twice.

Dr. Bloodgood stated in his paper that it was important for every physician and dentist to know that he had never found the organisms of Vincent's Angina in a mouth from which all the teeth had been extracted. I have encountered a



case in a six-months-old baby that had no erupted teeth, which had a grayish patch over the site of the lower incisors that strongly resembled a Vincent's patch. A microscopical smear proved the organisms to be present and the condition rapidly cleared up under the specific treatment.

Previous to the World War no specific treatment had been found, but during the outbreak in the trenches the Army Medical Corps discovered that both arsenic and sodium perborate possess specific properties. One of the clinical peculiarities of the disease is the difference in response to treatment. Some cases with extensive lesions will immediately respond to either arsenic or soda perborate applications, while other cases with a few small patches prove very stubborn to deal with. It is my experience that the alternate use of these two drugs will give the most effective results. And my method of treatment is to make all local applications myself. In the mornings I go over the entire mouth and throat, going well in between the teeth and in the tonsillar crypts, swabbing the healthy as well as the involved portion of the mucous membrane with a watery paste of soda perborate. In the evening the area is swabbed with a glycerin paste of arsphenamine. Those patients with extensive lesions complain of severe burning lasting considerable time from the arsephenamine. This I find the greatest objection to its use and I have found no way to mitigate its severity. In the intervals between swabbing I have the patient rinse the mouth and gargle the throat with a solution of  $\frac{1}{2}$  ounce each wine of ipecac and Fowler's solution in 6 ounces of peroxide. When the membrane is extensive and thick, I think I get better results to precede each swabbing with a 2% chromic acid solution immediately neutralized with soda mouth wash. This seems to soften the exudate and render it more penetrable to the action of the specifics. I have derived no benefit from the intravenous use of the arsephenamines, nor has mercurio-chrome-methylene blue or other antiseptics locally applied been of any benefit in my hands.

An important point to bear in mind is not to relinquish treatment too quickly. It is best to continue it for several days after all local evidence of the disease has disappeared, and really should not be discontinued until repeated smear examinations are negative for Vincent's organisms.

## CASE REPORT OF IMPACTED URETERAL CALCULUS\*

E. S. GILMER, M.D.,  
Tampa.

The diagnosis and treatment of ureteral calculus has been the topic of much discussion among medical men in the past few years, and there is probably no other in which the advancement and improvement have been greater than in this subject. Before the advent of the X-ray, the diagnosis was never definitely made and even after that it was always problematical until recent refinements in instrumentation and diagnostic methods. By X-ray many calculi were discovered that would not have been otherwise. With the introduction of the cystoscope and shadow-graph catheter it was possible to diagnose many more. Since the development of pyelography, comparatively few have escaped diagnosis by men trained in these methods of procedure.

Prior to comparatively recent years the treatment of uteral calculus consisted in delivery of the kidney, where search for the stone was made and passing of instruments down the ureter for the purpose of detecting and removal of the stone when possible. By means of the X-ray, many were definitely located and removed by ureterotomy; but even with this valuable assistance many useless major operations were performed, the shadows detected by X-ray and diagnosed as calculi being due to pheboliths, calcified glands or other objects outside the ureter. By cystoscopy, ureteral catheterization and pyelography we may determine the presence or absence of calculi, their exact location when present and the manner of treatment indicated. Cabot has shown that 15% of all urinary calculi are not demonstrated by X-ray, but by ureteral catheterization and by injection of an opaque solution as thorium or sodium bromide into the ureter and renal pelvis, thereby coating the stone with the solution, when it will cast a shadow of the stone on the X-ray film in the great majority of instances.

About 80% of ureteral calculi may be removed or assisted to pass by intra-ureteral manipulation by means of the catheter, some may be entirely too large to pass or may be encysted or so adherent that they cannot be freed. Some may be so impacted as to completely and permanently obstruct the passage of urine and prevent passage

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of either catheter or bougie for drainage and require urgent surgical procedure for removal, particularly in those cases where infection has taken place above the stone. Also in cases of reflex anuria, stone or other pathology involving the other side. These are some of the main reasons for urgent major surgical interference, but they are in the minority as regards occurrence as is shown by statistics. Crowell believes that nearly all recently impacted calculi may be removed by intra-ureteral manipulation and reports 78 consecutive cases in which 76 were removed by this means. Walther says that only in extreme cases where repeated cystoscopic treatments prove unsuccessful and where ureteral obstruction exists should surgery be contemplated. With this opinion I do not wholly agree. I believe that ureteral calculus is always a menace to the life of the corresponding kidney and that if temporizing does not result in its expulsion in a reasonable length of time it should be removed by more radical means. The following case is a fair illustration of what may be accomplished in cases of impacted ureteral calculi:

J. C., age 29, white, single, American; occupation, secretary; referred by Dr. Blake, entered hospital October 24, 1924, complaining of severe colicky pain in right side below the ribs radiating upward toward the kidney and downward to the right testicle and thigh, accompanied by slight nausea, no noticeable frequency nor burning on urination and no hematuria. This pain began 3 days previous to his entrance into the hospital, was sudden in onset and had been continuous except when under the influence of opiates. Urine seemed to be somewhat less in quantity than usual. Gave history of appendectomy in 1921 for chronic appendicitis and a previous attack similar to this one when X-ray showed a calculus in the lower calyx of the right kidney. Had gonorrhea in 1920 which was never completely cured. Family history was negative. Physical examination was negative except tenderness over the right kidney and along the course of the right ureter. Prostate slightly enlarged and tender.

On October 24th, day of entrance to the hospital, cystoscopy was performed and all attempts to pass either catheter or bougie failed, obstruction being met 3 cm. from the orifice. X-ray showed small stone in ureter just above the bladder. This was attempted again the following day with the same results. Two days later cys-

toscopy was again performed, catheters again failed to pass, but, with considerable difficulty, a stiff number 8 bougie was passed a distance of 15 cm. and left for some time. On withdrawal of the bougie, about 2 drams of thick purulent material was expelled from the ureteral orifice. From that time on the patient had no more pain. Three days later a number 8 catheter was passed to the renal pelvis with little difficulty. A pyeloureterogram showed the ureter dilated and tortuous with a kink at the uretero-pelvic angle and a moderate hydro-nephrosis. Next day he was feeling well and was discharged from the hospital. On arriving home, he had the desire to urinate and passed his calculus without pain.

Voided specimen of urine on entrance to hospital showed many pus and blood cells. On ureteral catheterization, urine from right side showed many blood cells and a few pus cells, from the left side a few red cells and an occasional pus cell. Phthalein intravenously appeared on right side in 5 minutes and left side in 3 minutes. Elimination 5% from both sides in 15 minutes. Blood urea made second day in hospital showed blood urea 149 and creatinine 2.1 per 100 c.c. of blood.

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#### SOME EXPERIENCES IN THE TREATMENT WITH X-RAY OF UTERINE FIBROIDS ASSOCIATED WITH HEMORRHAGE\*

A. C. Ives, M.D.,  
Tampa.

The X-ray treatment of uterine fibroids associated with hemorrhage, is particularly of service in those cases that are unsuitable for surgical operations, and those who for some reason refuse operation.

A very satisfactory clinical result can be obtained by X-ray treatment.

The underlying principles of this method are the destruction of the Graffian follicles that remain in the ovary and the development of fibroid tissue in the tumor itself, producing an atrophy of the endothelial lining of the blood vessels and an obliteration of the cell nuclei.

By experience we learn that the number of treatments required are influenced by the age of the patient. Those over forty are more responsive.

Radium has been introduced into the uterus to bring about the same results. It behaves in a

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similar manner to the X-ray, causing destruction of the follicles, etc., but the objections are that it oftentimes produces an irritability of the bladder, pelvic pain, and the leucorrhœa that last for several months, to say nothing of the danger of a permanent amenorrhœa in the younger woman. It is also more of a surgical procedure requiring hospitalization and generally an anesthetic.

I believe at the present time that radium is not so popular as heretofore.

The use of the X-ray is harmless, requiring no loss of time, and very little inconvenience to the patient, since it is only necessary that they visit the laboratory for a few days once a month.

According to the method of Witherbee and Remur, aluminum filtration was used, requiring a much longer time of treatment to bring about the desired result, as the skin could only stand a short exposure. Cross-firing was necessary to get the proper dose into the tumor; however, Williams has modified the technique by using copper filtration, enabling us to give much longer exposure time without danger.

We try to produce an amenorrhœa in one treatment extending over four days—the copper filtering out the soft rays that injure the skin. We give a small dose each day to prevent nausea and discomfort from a too intensive dosage. If the desired result is not obtained a similar dose is repeated at the end of a month.

The uterus reaches, or at least nearly reaches, its normal size at the end of a year after the cessation of hemorrhage. Of course the symptoms that go with the normal menopause are more or less present and cannot be entirely avoided.

The treatment of menorrhagia and metrorrhagia in my hands has been very satisfactory since February, 1924.

All of the cases that have taken sufficient treatment have been clinically cured, the anemia overcome and the patient has gained weight.

Those with fibroid, the tumor has been reduced in every instance and the patient has enjoyed better health.

One particular case—Mrs. J. R. D., age 49—who was a very stout woman and had a large fibroid that reached nearly to the umbilicus. Her chief complaint was hemorrhage and the inconvenience of tumor in the abdomen. She received three treatments, one month apart. At the end of that time the hemorrhage had ceased, but there was no marked decrease in the size of the fibroid. Upon examination one year later the

fibroid was about the level of the pubis and the patient enjoying good health.

Another patient of somewhat different type—Mrs. C. H. K., age 52—slender of build and quite thin with no palpable tumor, was suffering from a constant metrorrhagia, quite anemic and decidedly weak, and unable to perform any of her household duties. She received five treatments before the cessation of hemorrhage. Since that time she has put on considerable weight and her hemaglobin is nearly normal.

X-ray treatment is indicated in certain cases for uterine hemorrhage either with or without the presence of fibroid.

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#### DOUBLE PREGNANCY—ONE IN UTERO AND ONE IN RIGHT TUBE\*

T. M. McDUFFEE, M.D.,

Manatee.

In reporting this case, I do not expect to bring something new before the profession, but something very rare. Mrs. B., age 29, family history good, mother of four children, all living and in good health; had a premature labor at about the sixth month, 1908. Did not know any cause for same. Became pregnant March, 1910, had no trouble until April 29th, when she was taken with sudden lancinating pain in right inguinal area in the region of tube and ovary, with sick stomach, almost syncope, heavy sweat. Took her bed at once, and remained there until May 14th, when I was called. External examination revealed tenderness in right inguinal region. Diagnosis, extra-uterine pregnancy, with a beginning rupture. I advised an immediate operation, which was successfully performed by Dr. J. S. Helms, of Tampa, on May 17th. Patient made an uneventful recovery, and everybody was happy.

But, gentlemen, we were not out of the woods, for in about two months her husband reported to me that his wife's breasts were growing and her abdomen was getting larger, and she was sure that she could feel motion, so I called to see her, and found that she was pregnant, and would be confined in due time.

December 5, 1910, I delivered her of a well-developed girl baby, it being just about nine months from the time of the tubular pregnancy, showing without any doubt that both impregnations had taken place at the same time. Mother and baby are both living today, and in splendid health.

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# THE NORMAL RELATIONS OF PSYCHIATRY TO THE GENERAL PRACTICE OF MEDICINE AND SURGERY\*

G. H. BENTON, M.D., F.A.C.P.,

Coral Gables.

Commensurate with the modern advanced comprehension of the present day, psychiatry and its importance in every-day practice of medicine and surgery is becoming more and more fully recognized. Its advantages are comprehended by virtue of the accumulated knowledge and through experience in the art of medical practice both in the field of diagnosis and therapeutics.

The former idea of psychiatry was identified almost entirely with patient exhibiting maniacal violence. Institutions devoted to the custodial care of the insane were terminal emergencies, with little or no connected conception of detecting early symptoms, corrective measures or mental prophylaxis.

The advancing interest in the study of psychology normal and abnormal and its relations to human conduct as represented by the very definite system of reactions arising from autonomic states both within and without the influence of the higher mental qualities exhibited in the direction of inhibitions, have placed psychiatry in immediate valuable relation to all degrees of both normal and abnormal psychiatric situations which obtain continuously in both health and disease.

The present-day conception of psychiatry is along the line of "psychological medicine," a terminology suggested by Dr. Maurice Craig, a celebrated English alienist who long ago recognized the every-day need of psychiatry in the art of the practice of medicine and surgery. Thus taking accurate account of the psychiatric situation of every patient under consideration, with a view of estimating the exact value of each psychic as well as the somatic factor which constitute the whole and reactive elements in the symptomatology exhibited or underlying, leads one to a more comprehensive diagnosis and is of still more importance in the therapeutic management of the patient under consideration.

Owing to the very limited amount of "psychological medicine" formerly taught or available in our medical colleges, students received only a very vague idea of the subject, with little or no conception of its value or importance; therefore, no adequate conception of its daily

practicability and need, and still less wisdom in its application.

Also, this meagre knowledge disseminated within the routine of the average medical college was so thoroughly impregnated with vague mythological concomitances as to obscure its definite relationship to the daily practice of medicine and surgery, even when it did not foster in the student a state of confusion, a feeling of self-distrust, and often result in a total disgust for the subject, thus excluding it from his personal armamentarium.

Frequently such an aversion for the subject was created that the student began the practice of medicine with the conviction that the neurotic patient should be regarded with suspicion, and with very little tolerance for the psychoneurotic, because of his personal feeling that all neurotic symptoms were complaints which were merely the products of the imagination and consequently not to be considered seriously, but dismissed with the advice to "forget it."

Every medical man of today should be aroused to the recognition of the truth of the situation that it is often his repeated failures that make him financially poorer and the quack financially richer, while the same factors constitute the opprobrium with which he is often personally regarded both professionally and socially in his community, while the quack and charlatan thrive.

The medical man's mind is well educated, well trained, and he is a competent individual, beginning the practice of medicine with absolute, definite knowledge together with some wisdom accruing from his individual experiences as well as that which he has culled from the experience of his instructors and other associates. He is welcomed and appreciated by his colleagues. Nevertheless, he is in direct competition with ignorance, illiteracy, sophistry and general chicanery from the lowest chiropodist to the highest intellectual Christian Science healer. From the "two-bit" palmist to the billionaire patent medicine trust, all of whom are ready and waiting to turn human complaints and afflictions, through the dominating human credulity, into good American dollars.

All patients suffering with functional maladies exhibiting no organic lesions, which may be due to physical causes more or less obscure, and which the untrained man chooses to regard as symptomatic products of the imaginations and dismisses with the advice that "nothing is the

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matter—go home and forget it,” opens the door of opportunity for the “quack” and charlatan, who use methods to extract dollars from their victims without any knowledge of the technic or any concern as to results. These same methods are often shunned by the reputable physician because he has not learned to comprehend their need, use or value, while the illiterate and ignorant “quack” knows that he can speculate upon human credulity and get the coin.

Maladies based on psychogenic aspects are to the patient as important as an organic lesion of gross magnitude and often produce more discomfort, and too often the psychogenesis has a physical concomitance not readily demonstrated but nevertheless active.

To be able to comprehend these and kindred situations and estimate their importance in the direction of relief for the patient is the prime factor in the normal relation of psychiatry to the general practice of medicine and surgery.

Not that every practitioner can become an adequate psychiatrist. However, every practitioner can familiarize himself with the principles of modern psychiatric practice and thus evaluate the psychiatric situation of his patient and possibly furnish the necessary suggestion or other means of treatment. If too complicated he can direct the patient to some one more fully trained in psychiatry where relief can be secured together with a knowledge of the means and rules for readjustments, as well as further some training in mental hygiene in order to insure a more ready adjustability for future problems which are continually arising in the experiences of us all.

Every legalized practitioner of medicine from whom a patient seeks relief for whatsoever kind of malady he may be suffering, has a right to the belief which he maintains, that every physician knows all medicine and possesses the art of its application in all of its intricate branches. This is, of course, not strictly true. Years of practical experience during the evolution of the science of the practice of medicine have made necessary the different specialties in order to obtain the better results in execution. Yet, every practitioner should be able to comprehend the necessity or the benefit to be derived by competent understanding of the principles underlying the different specialties and if he does not possess this training to such a degree as any case demands, he should advise his patient where he can obtain the required skill. In the process of such advice,

he should give only such details as are competent to hold the patient in readiness to respond to the discretion of the physician to whom referred. This is particularly important in cases of so-called nervous and mental diseases, because emotional states and sentiments both within the immediate patients and their families influence the psychiatric situation either favorably or unfavorably. It is well, then, to leave the patient and their friends with extremely open minds as to conditions and details so that the trained specialist does not first have to overcome prejudices, fixed conclusions contrary to the patient's best interests and their management therapeutically.

So often most faulty methods are pursued in cases where the psychiatric situation is perverse and the attending physician feels that the patient's incompetent reactions are an expression of more or less total disintegration, and hazards, exorbitant statements, and extravagant suggestions extremely harmful and often persist indefinitely in spite of attempted efforts at correction.

This occurs because he fails to comprehend and understand the situation or the natural order and mechanism of occurrence psychologically in the patient's real condition, which to the trained man is so clearly apparent and seemingly so simple that he wonders why everyone does not understand the situation with all its import.

The psychological details presented in these various psychiatric situations cannot be expressed within a paper of this length. They are both voluminous and technical and to an audience untrained in psychiatric nomenclature only confusion and misunderstanding obtains, nor can one indulge reasonably in an attempt to expatiate upon the thousand and one conventional forms of approach. To the inner sanctuaries of the individual conception of the experienced psychotherapist and psychopathologist, comprising that vast hord of metaphysical nebulosities of undemonstrable factors which are so continuously being bandied about among the elect, precipitating within the minds of the untrained a psychiatric situation of confusion and often disgust.

These methods and mechanisms represent the specialized tools of the especially trained worker in the field of psychiatry, including the individual psychiatric situation whether or not it is dominant or subdominant. It is a relative part of the malady and competent attention should be given with the ability for such advice as will



best guard the interests of the patient, in the direction of rehabilitation, amelioration, or of teaching the patient to be able to condone such conditions as cannot otherwise be more advantageously dealt with.

Briefly, the psychiatric situation obtaining in every individual continuously is just as much a part of the picture whether in or out of health at the time, and often when out of health this element is one of the important aspects of the case—sometimes dominating the whole situation disastrously. It demands adequate attention of a definite sort based upon competent understanding of the elements involved so that advantageous therapeutic means may be pursued for its relief, modification or removal when possible.

The specific psychiatric situation, whether good or bad, arises from the specific personality equation of the individual patient and presents an average response to environment plus training or more often the absence of training.

Remember the ever-present influence of environment carries along, always, elements reflected from every situation of human experience from the beginning of primitive human history to the present moment. The early superstitions in conjunction with general ignorance arising on the basis of autonomic needs of the individual establishing certain feeling tones, which demand gratification, dominate the situation entirely outside the field of the "psychia intellectualis" as the former are entirely autonomic.

Within the earlier periods of human experience and in the natural process of evolution by virtue of the inherent tendency, "to use our structure in an ancestral manner," habits of reaction were established saturating the environment and passing on from generation to generation as "folk lore" which, though serving a need in the evolution of human psychology, we have failed to outgrow. This is often witnessed by the reverence shown such expressions as "what is born in the bone will be bred in the flesh," which we are too ready to universally accept as a fixed truth without the trouble of critical observation, exposing the lack of relations or values of their integral factors.

Universal human psychology is attended with a very strong desire to accept and believe those things which please us, and often reject such matters as fail to please, or naturally displease us, without expending any effort on adequate analysis, or being subjected in any way to critical judgment. This reaction thus establishes a feeling

tone so dominant that we are often ready to defend most ridiculous situations and attitudes establishing prejudices which are the end result of a feeling tone, a reaction concomitant in physiological and psychological values with the conditioned reflex so adequately demonstrated in the modern physiological laboratories by Drs. Cannon, Pavlov and others.

The conditioned reflex represents an adequate demonstration of the functional capacity of the autonomic nervous mechanism in its role of self-preservation and longevity of the animal human or otherwise, and here one may observe and comprehend the rather exact relationship physiologically and psychologically between the psychia and the soma which is as much an integral part of the biological entity as life itself. In fact, it is life itself and this same co-ordination maintains in health and disease alike.

Thus, it appears to me and many others that you should not fail to comprehend the normal relations of psychiatry to the general practice of medicine and surgery and appreciate its needs and advantages to both the physician and the patient.

Then, too, there is the easily acquired knowledge of the principles of mental hygiene, which is so advantageous as a prophylactic measure in the line of preventing the multiplicity of functional psychoses which fill our institutions at public expense, and of which the greater number continue to succumb to the influence of their environment and persist in reacting at that level, remaining public charges during the balance of their lives. Individual work on the part of the physicians in the institutions with each patient is impossible in sufficient amounts to effect a readjustment. Often among the inmates of state institutions and sometimes fails in private institutions owing to the individual static conditions, but the private institutions return to society a greater number of patients readjusted than is possible from the state institutions.

The general dissemination of the principles of mental hygiene among the laity is a knowledge of the "gospel of right thinking, to enable a better way of right living," to establish the fact generally that the functional psychoses are a result of faulty thinking and over-reacting to normal stimuli including misinterpretations of feeling tones, and other perversions occurring from the general autonomic states, the mechanism of which is comprehended in the study of mental hygiene.



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Nassau, Clay, Duval, St. Johns.  
FIFTH DISTRICT—J. L. CHALKER, M.D. . . . . Ocala  
Citrus, Marion.  
SIXTH DISTRICT—R. H. KNOWLTON, M.D. . . . . St. Petersburg  
Pinellas.  
SEVENTH DISTRICT—MALRICE E. HECK . . . . . DeLand  
Brevard, Volusia, Seminole.  
EIGHTH DISTRICT—G. C. TELLMAN, M.D. . . . . Gainesville  
Putnam, Levy, Baker, Bradford, Union, Flagler, Alachua.  
NINTH DISTRICT—D. M. ADAMS, M.D. . . . . Panama City  
Holmes, Washington, Bay.  
TENTH DISTRICT—HERMAN WATSON, M.D. . . . . Lakeland  
Polk.  
ELEVENTH DISTRICT—R. J. HOLMES, M.D. . . . . Miami  
Dade.  
TWELFTH DISTRICT—W. B. WINKLER, M.D. . . . . Ft. Myers  
Glades, Charlotte, Hendry, Lee, Collier.  
THIRTEENTH DISTRICT—JOS. W. TAYLOR, M.D. . . . . Tampa  
Hillsboro, Hernando, Pasco.  
FOURTEENTH DISTRICT—R. L. KENNEDY, M.D. . . . . Malone  
Calhoun, Jackson, Gulf.  
FIFTEENTH DISTRICT—W. E. VAN LANDINGHAM, M.D.  
Palm Beach, Broward . . . . . West Palm Beach  
SIXTEENTH DISTRICT—W. J. CALVIN, M.D. . . . . Eustis  
Sunter, Lake.  
SEVENTEENTH DISTRICT—L. C. INGRAM, M.D. . . . . Orlando  
Osceola, Orange.  
EIGHTEENTH DISTRICT—DAVID R. KENNEDY, M.D. . . . . Sarasota  
Manatee, Sarasota.  
NINETEENTH DISTRICT—C. H. KIRKPATRICK, M.D. . . . . Arcadia  
DeSoto, Hardee, Highlands.  
TWENTIETH DISTRICT—WILLIAM R. WARREN, M.D. . . . . Key West  
Monroe.  
TWENTY-FIRST DISTRICT—H. D. CLARK, M.D. . . . . Ft. Pierce  
St. Lucie, Okeechobee, Indian River, Martin.

### WOMAN'S AUXILIARY

MRS. G. E. CHANDLER, PRESIDENT . . . . . Miami  
MRS. M. A. LISCHKOFF, VICE-PRESIDENT . . . . . Pensacola  
MRS. ROBT. HARRIS, RECORDING SEC'Y-TREAS. . . . . Miami  
MRS. M. J. FLIPSE, CORRESPONDING SEC'Y . . . . . Miami

## THE ANNUAL MEETING

An institution, be it financial, religious, political, scientific or philanthropic, that does not have an annual meeting, convention, or convocation does not long figure as an active forceful organization. Nowhere is this more true than in the near philanthropic group of men known as a Medical Society.

There are three main avenues, viz.: organization, fellowship and scientific program through which benefits may come to those who attend the annual meeting and also indirectly to others in the association, who are unable to be present.

In the first instance, the direct benefit will come to what we may call the "working group" of several hundred men, who assembled in session, review the work of the past, note its failures and successes and with these as a guide formulate plans for the future; select the men who are best fitted for executive work, name the committees which carry on the work of the Society between meetings and do whatever else may be necessary to make the organization a unit in its activity; a

power in the State and of service to and a protection for all of its members, whether they are able or not to attend its sessions.

The second feature lies in the renewing of old friendships and the forming of new ones. For a year, perhaps for several years, we have looked forward to the time when we would again meet the men, who by word or deed had made a lasting impression at some previous meeting. Also we gain rest and our spirits are revived by being away from the jangle of the telephone, the daily worries in the life of the active practitioner and the constant rehearsal of ills and misfortunes which din in our ears. Here we may relax and enjoy ourselves and give the smile, the gentle jest and the merry story, rub elbows with our friends and chat intimately, realizing that there is no need for haste and that our only interruption will be the appearance of another sought-for comrade. This phase really constitutes the greatest value to practitioners so widely separated, as in a State like Florida.

And lastly is the scientific program, which is provided as a source of information and knowledge and for the exchange of views. Your committee must bear in mind that to round out the program, it must provide papers for the various specialists, as well as for the general practitioner. They should not only select papers from men previously well known and well informed, but must be prepared to give space to the younger or newer men, who are progressive in views and action and must also consider the geographic location, as every section of the State should have an opportunity of representation. Where more than one paper on the same subject is proposed, they must either select the one which apparently proves the most interesting or by dividing the subject provide a symposium.

This portion of the meeting while more formal than the preceding ones mentioned, by the discussions provoked may become, as it should be, the important feature of the session. To make this of greater value to the individual and the profession at large, it is essential that those desiring a place on the program should make known their thoughts and wishes to the program committee at an early date.

Make your plans now and be present at the annual meeting of your association in St. Augustine April 2nd and 3rd, 1929. Send the title of your paper at once to some member of the program committee, or if you do not desire to give

one, be prepared to take part in the discussion of one or more papers which will be read, the titles and synopses of which will be announced some time before the meeting.

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#### PELLAGRA IN MAN AND BLACK TONGUE IN DOGS FOUND TO BE DUE TO SIMILAR CAUSE

The results of an important series of studies made by Dr. Joseph Goldberger, and his associates, of the U. S. Public Health Service, have recently been published, which indicate that black tongue, a disease of dogs, and pellagra, a disease of man, are practically identical. In connection with such studies an interesting investigation has been made of the pellagra-preventing properties of sixteen foods. These foods are maize, wheat, wheat germ, cowpea, soy bean, milk, butter, cod liver oil, cottonseed oil, lean beef, pork liver, salmon, egg yolk, tomatoes, carrots and rutabagas.

It seems clearly indicated that so far as the studies have been conducted, the foodstuffs that appear to be good sources of the black-tongue preventive also appear to be good sources of the pellagra preventive; those that appear to be poor sources of, or lacking in the black tongue preventive likewise appear as poor sources of, or lacking in, the pellagra preventive. This, it should be noted, is not a mere similarity in distribution of the respective preventive essentials among the foodstuffs—it is a similarity in the potency of the action of these foodstuffs in the respective diseased conditions, and, thus, it would seem to constitute evidence of weight pointing to the identity of the preventive essentials, and, therefore, to the identity of black tongue and pellagra.

The black tongue preventive potency of 16 foodstuffs has been studied and correlated to the pellagra preventive potency (or lack of it) of those, eleven in number, for which this was known, with the following results:

*Maize*, if it contains any, is a poor source of the preventive for both black tongue and pellagra.

Whole *wheat* contains the black tongue preventive, but in small amount.

Commercial *wheat germ* contains, and may be rated as a relatively good source of, the preventive for both black tongue and pellagra.

The *cowpea* contains, but is a poor source of, the preventive for both black tongue and pellagra.

The *soy bean* contains the black tongue preventive, but in relatively small amount, appreciably more, however, than the cowpea, but considerably less than the extracted wheat germ. So far as it goes the experience with the soy bean in the human disease is, at least, not inconsistent with that in the experimental disease of the dog.

*Milk* contains the preventive for both the human and the canine disease, but contains it in relatively small amount.

*Butter*, while not devoid of it, is a relatively very poor source of the black tongue preventive, a conclusion that is in harmony with the experience with butter in pellagra.

*Cod liver oil* would seem very poor in or lacking the preventive for both black tongue and pellagra.

*Cottonseed oil* contains little, if any, of the preventive for black tongue. No specific study of the effectiveness of this oil in pellagra has been made; on the basis of general experience it seems unlikely that this oil contains the pellagra preventive in significant amounts.

*Beef muscle* is a good source of the preventive for both black tongue and pellagra.

*Pork liver* is a good source of the black tongue preventive; it has not yet been studied in pellagra.

*Canned salmon* contains the black tongue preventive. A study of its effectiveness in pellagra is in progress.

*Egg yolk* contains the black tongue preventive; a specific study of its value in pellagra has not yet been undertaken.

The canned *tomato* contains the preventive for both black tongue and pellagra, but in relatively small amount.

The *carrot* contains, but is a relatively poor source of, the preventive of black tongue. Its reported failure in pellagra prevention is consistent with the indications of its feebleness as a black tongue preventive.

The *rutabaga* turnip contains, but is a relatively poor source of, the black tongue preventive. Its failure in pellagra prevention is consistent with its poverty in the black tongue preventive.

The pellagra-preventing vitamin is believed to be present in nearly, if not quite, all natural foods except the oils and fats, but in very greatly varying amounts. Thus there is very little in corn meal, white flour, or rice; somewhat more in wheat middlings, and a great deal in lean meat and powdered yeast. Unfortunately, it is not yet known just how much each food contains nor

how much the body must have for the maintenance of health. In considering prevention and treatment it is, therefore, necessary to proceed on general principles, guided by such knowledge of relative values as we already have.

*Powdered yeast*.—Dried pure yeast is the richest "P-P" (Pellagra Preventive) containing food at present known. It is also very rich in protein and in the beri-beri-preventing vitamin, so that it should rate high as a food. This yeast is a microscopic plant cell used in baking and brewing. For use as a food the yeast plant should preferably be dead. In the home it may readily be killed by stirring the dry powder into some water and then boiling for about one minute. In the adult, 1 ounce a day (or two teaspoonfuls three times a day) of the pure powdered yeast will of itself suffice to prevent pellagra. It may be taken in any way that is most convenient, as, for example, in water, in milk, in tomato juice, in syrup or molasses.

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## STATE NEWS ITEMS

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### FLORIDA ROENTGENOLOGISTS MEET

A well-attended and enthusiastic meeting of roentgenologists of the State was held in Tampa October 27th. Seventeen were present, all parts of the State being represented. A permanent organization was perfected with plans to meet next on the Monday preceding the annual meeting of the Florida Medical Association.

This meeting was called by the Chairman, Dr. J. C. Dickinson of Tampa, who presided at the morning and afternoon sessions. Following the custom (as suggested at the first meeting last April in Tampa when this association was first organized) the assembly took the form of an informal round table discussion with each man bringing up his individual problem for free discussion by all those present. Many of the men brought films for demonstration. An excellent scientific exhibit was presented by Drs. Dickinson and Allen of Tampa.

At the afternoon session, following luncheon at the Plaza, Dr. J. B. Farrior of Tampa addressed the meeting on the aid of roentgen examination in the diagnosis of diseases of the antra. Dr. Farrior illustrated his remarks by lantern slides.

Dr. L. W. Cunningham of Jacksonville was elected chairman for the coming year. The meeting was a very instructive one and all pres-



ent expressed the opinion that this Society would supply a long-felt need in furthering the common aims of the Florida roentgenologists.

Those attending this meeting were:

From Tampa, Drs. A. C. Ives, R. E. Baldwin, J. C. Dickinson, Bundy Allen; St. Petersburg, Drs. J. A. Herring and O. O. Feaster; from Clearwater, Dr. H. O. Brown; from Lakeland, Dr. Walter Weed; from Ocala, Dr. J. N. Moore; from Gainesville, Dr. J. Maxey Dell; from Fort Lauderdale, Dr. E. M. Hendricks; from Miami, Dr. F. J. Payton, Dr. C. D. Cleghorn; from Jacksonville, Drs. L. W. Cunningham, J. A. Beals, H. B. McEuen and W. M. Shaw.

\* \* \*

Dr. Grace E. Papot announces the removal of her offices to 310 Comeau Building, West Palm Beach.

\* \* \*

The Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society met at Chattahoochee, October 11, and elected the following officers for the ensuing year: Dr. J. C. Davis, Quincy, president; Dr. J. C. Inman, Jr., Chattahoochee, vice-president; and Dr. F. C. Moor, Tallahassee, secretary and treasurer.

\* \* \*

Dr. D. E. Cline, formerly of Weliborn, is now practicing in Perry.

\* \* \*

Dr. Meredith Mallory of Orlando recently attended the Interstate Post-Graduate Meeting held in Atlanta.

\* \* \*

Dr. Shaler Richardson, Jacksonville, secretary-treasurer of the Florida Medical Association, recently attended the American Academy of Ophthalmology and Otolaryngology held in St. Louis.

\* \* \*

The Volusia County Medical Society held its regular monthly meeting at DeLand, Tuesday, October 9th, with eighteen members present.

\* \* \*

A son was born to Dr. and Mrs. George Drew Conger of Miami on August 19th.

\* \* \*

Dr. and Mrs. J. T. Denton of Sanford have returned from a visit of two weeks in Washington, D. C.

\* \* \*

Dr. R. E. Stevens of Sanford is doing post-graduate work in anesthesia at New York.

Dr. J. H. Pierpont of Pensacola was recently called to Atlanta on account of an accident which occurred to his sister, Miss L. Pierpont. Miss Pierpont fell from some steps to the sidewalk, and sustained a tranverse extra-capsular fracture of the neck of her left femur. She is being treated in the Georgia Baptist Hospital.

\* \* \*

Dr. J. R. Bruce of Jasper was a visitor at the business office of the Florida Medical Association in Jacksonville on October 31st.

\* \* \*

Dr. F. S. Jennings, who for some time has been a resident of Dryden, New York, has returned to his former home in St. Petersburg, and has opened offices at 149 Second Street North.

\* \* \*

Dr. W. M. Rowlett of Tampa recently returned from a four-weeks' hunting trip in Nova Scotia.

\* \* \*

Dr. M. B. Herlong of Jacksonville recently attended the International Association of Street Sanitation Engineers held in Toronto.

\* \* \*

Dr. L. C. Ingram of Orlando recently attended the American Academy of Ophthalmology and Otolaryngology held in St. Louis.

\* \* \*

The Ladies' Auxiliary of the Volusia County Medical Society met in DeLand October 9th, having a combined dinner and card party. The meeting was well attended.

\* \* \*

Dr. James F. Miller of Inverness returned recently from an extensive trip with the Knight Templars to northern points, including several places in Canada.

\* \* \*

Dr. L. T. Furlow, formerly of Brooksville, has recently moved to Leesburg and has transferred his membership from the Pasco-Hernando-Citrus County Medical Society to the Lake County Medical Society.

\* \* \*

Dr. Kenneth A. Morris announces the removal of his offices to 610 Professional Building, Jacksonville.

\* \* \*

Dr. C. A. Andrews of Tampa recently addressed the monthly meeting of the Hillsboro County Medical Society.

(Continued on page 264)

County Society	Secretary	Date	Time	Place	Luncheon?	Paid.
Alachua .....	J. L. Summerlin, M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	81%
Bay .....	D. M. Adams, M.D., Panama City.					100%
Bradford .....	Seeber King, M.D., Lake Butler.					67%
Brevard .....	I. K. Hicks, M.D., Melbourne.	Varies		Varies		79%
Broward .....	Leigh F. Robinson, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	85%
Columbia .....	P. C. Farnell, M.D., Lake City.	1st Monday.	7:30 P.M.	Chamber of Commerce	No.	100%
Dade .....	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	82%
DeSoto-Hardee- Highlands ...	C. H. Kirkpatrick, M.D., Arcadia.		8:00 P.M.	Varies	No.	94%
Duval .....	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Duval County Hospital	No.	96%
Escambia .....	J. M. Hoffman, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	97%
Hamilton .....	R. A. Barnett, M.D., White Springs.					
Hillsboro .....	Frank T. Barker, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	City Hall	No.	84%
Jackson .....	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	100%
Lake .....	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes.	100%
Lee .....	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	75%
Leon-Gadsden- Liberty- Wakulla- Jefferson .....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	96%
Madison .....	Geo. O. Davis, M.D., Madison.					100%
Manatee .....	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	100%
Marion .....	J. L. Chalker, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	85%
Monroe .....	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	86%
Orange .....	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	85%
Palm Beach ...	S. W. Fleming, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	85%
Pasco- Hernando- Citrus .....	T. F. Jackson, M.D., Dade City.	2nd Tuesday	8:00 P.M.	Varies	Yes.	100%
Pinellas .....	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Fla. Art School	No.	100%
Polk .....	Geo. C. Overstreet, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	82%
Putnam .....	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	82%
St. Johns .....	J. M. Irwin, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeecho- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.					83%
Sarasota .....	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	93%
Seminole .....	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		93%
Sumter .....	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	87%
Suwannee ....	W. C. White, M.D., Live Oak.					100%
Taylor .....	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia .....	R. L. Miller, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	97%
Walton- Okaloosa ....	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington-	W. C. Harper, M.D., Chickasaw.					43%

Drs. W. M. Rowlett, John S. Helms and A. M. C. Jobson of Tampa attended the annual convocation of the American College of Surgeons held in Boston on October 8th to 12th.

\* \* \*

Dr. C. B. Mabry of Jacksonville, who attended the Interstate Post-Graduate Medical Assembly at Atlanta, extended his trip to Baltimore where he will spend some time in post-graduate study.

\* \* \*

A son was born to Dr. and Mrs. G. G. McGregor of Dade City on September 25th. The baby has been given the name of Richard Warren.

\* \* \*

Dr. L. L. Andrews, medical director of the Orlando-Florida Sanitarium, has recently returned from a vacation spent in the north and east:

\* \* \*

Dr. Ralph A. Rhodes of Horn Lake, Mississippi, who has been a member of the resident staff of the Duval County Hospital, Jacksonville, since last July, died suddenly from a cerebral hemorrhage on October 25. Dr. Rhodes was a graduate of the University of Tennessee, was a member of the Phi Delta Theta literary fraternity and also of the Phi Chi medical fraternity. He had made a host of friends during his residence in Jacksonville.

\* \* \*

The following Florida hospitals have been approved by the Standardization Committee of the American College of Surgeons:

Jacksonville: Duval County Hospital, Riverside Hospital, St. Luke's Hospital, St. Vincent's Hospital.

Key West: United States Marine Hospital.

Lake City: Veterans' Hospital.

Lakeland: Morrell Memorial Hospital.

Miami: Allison Hospital, James M. Jackson Memorial Hospital.

Orlando: Orange General Hospital.

Pensacola: Pensacola Hospital.

St. Augustine: East Coast Hospital, Flagler Hospital.

St. Petersburg: Faith Hospital.

Tampa: Tampa Municipal Hospital.

West Palm Beach: Good Samaritan Hospital.

Dr. J. C. Dunn, formerly of Ft. Pierce, is now located in Sebring.

The Hope Haven Clinic of the Tuberculosis Association of Duval County will in the future hold their clinics at 4 p. m. the first Wednesday each month. These clinics are available for children between the ages of two and twelve years who are seeking admission to Hope Haven or who wish to return for their regular re-examinations.

\* \* \*

The Central Florida Medical Society held its annual meeting in Orlando, October 18th, at the Hotel Marion. The society is composed of physicians from the counties of Alachua, Marion, Levy, Lake, Citrus, Hernando, Pasco and Sumter. Dr. B. S. Stutts of Dunnellon is president. The principal address was made by Dr. Gerry Holden of Jacksonville, his subject being "The Use of Radium in Gynecology."

The local physicians and their wives acted as hosts at a banquet given at the hotel, and numbered among those who were present from a distance were: Dr. and Mrs. J. L. Summerlin, Dr. and Mrs. T. D. Smith, Dr. G. C. Tillman, Dr. Lassiter from Gainesville; Dr. J. M. Willis, Wiliston; Dr. and Mrs. I. A. Daily, Micanopy; Dr. and Mrs. M. M. Hannum, Dr. and Mrs. J. D. Coupland, Dr. J. W. Calvin, Dr. C. M. Tyre, Eustis; Dr. W. R. Proctor, Dr. and Mrs. H. G. Holland, Leesburg; Dr. and Mrs. W. L. Ashton, Umatilla; Dr. and Mrs. Gerry R. Holden, Jacksonville; Dr. and Mrs. H. S. Cherry, Center Hill; Dr. and Mrs. T. F. Jackson, Dade City; Dr. W. E. Mitchell, Coleman; Dr. and Mrs. B. S. Stutts, Dr. J. F. Curry, Dunnellon; Dr. and Mrs. E. E. Strickland, Citra; Dr. W. C. Young, Chiefland; Dr. G. M. Floyd, Hawthorne.

\* \* \*

The regular monthly meeting of the Duval County Medical Society was held at the Duval County Hospital Tuesday evening, October 2nd. The society enjoyed an interesting address on "Organized Medicine" by Dr. Frederick J. Waas, president of the Florida Medical Association. Dr. Waas took up in detail the functions of the county medical society and stressed the opportunities for study which presented themselves in every doctor's practice.

The scientific program consisted of an interesting paper on "Heart Disease" by Dr. Stanley Erwin. Dr. Herrman Harris opened the discussion and the paper was discussed at length by Drs. Limbaugh, A. K. Wilson, Gammon, Kirk and Jelks.

(Continued on page 266)



## First Aids for Doctors

DEAR DOCTOR:

One careful look at the advertising pages of your State Journal shows there are a dozen or more "first aids" for physicians to be had for the asking. A late issue contained, among others, these advertisements with the offer of free samples:

The E. L. Patch Company, Parke, Davis & Co., Mellin's Food Co., Miltner Laboratories, Horlick's Malted Milk Corp., Laboratory Products Co., Maltbie Chemical Company.

Did you get your supply, doctor?

Just listen to what these advertisers offer:

Knox Gelatine Company: "Please write us for complete information and recipes."

Merck & Company, Inc.: "Literature free on request."

Squibb and Sons: "Write for full information."

Dr. Katherine L. Storm: "Ask for 36-page folder."

Mead Johnson and Company: "Samples and literature on request."

Hoffman-LaRoche Chemical Works: "A trial supply on request."

Abbott Laboratories: "Free catalogue and price list."

Frank S. Betz Company: "Betz Company catalogue free upon request."

Swan-Myers Company: "Write for complete information."

Guyer X-ray Company: "Write for full particulars."

S. H. Camp & Company: "Write for Physician's and Surgeon's Manual."

Stephenson Brace and Limb Company: "For further information, write to"

Lederle Antitoxin Laboratories: "Without charge, send me literature and a sample."

Victor X-Ray Corporation: "Reprint No. 587 will be sent on request."

American Optical Company: "The only way you can *know* how much better Tillyer Lenses are is to try them. Will you?"

Doctor, here is a wealth of material for use in your own office and practice. The "literature" is among the best to be had; full of the latest reliable information. Manufacturers spend a mint of money to give away valuable samples to physicians.

Our plea is that you send for them. They will be valuable to you, and the request will be appreciated by your Journal and by the manufacturer.

## NOTICE!

### Fifty-Sixth Annual Meeting

*of the*

### Florida Medical Association

*will be held at*

SAINT AUGUSTINE

*April 2nd and 3rd, 1929*

The October semi-annual meeting of the Florida Midland Medical Society was held in Lakeland, October 10th. The Florida Midland Medical Society were guests and met with the Polk County Medical Society. The following program was given:

#### MORNING SESSION

Program Began at Ten-Thirty  
"Cancer in Children—Report of Cases,"

Dr. E. H. McRae, Tampa.

"Some Things About the Eye, of Interest to the General Practitioner."

Dr. Wm. Patterson, Tampa.

"Chronic Endocervicitis."

Dr. H. A. Day, Orlando.

"Milk, Its Source, Quality, Purity and Its Relation to the Consumer,"

Dr. N. L. Spengler, Tampa.

(Adjourn for Luncheon, Thelma Hotel)

#### AFTERNOON SESSION

"The Problem of Feeding Infants and Children,"

Dr. W. E. Sinclair, Orlando.

"Rectal Stricture With Report of Cases,"

Dr. Jack Halton, Jacksonville.

"Papua and the Bismarck Archipelago." Latest custom illustrated by lantern slides with brief mention of disease prevalent amongst them.

Dr. Cecil Vaughn, Tampa.

Briefs of unusual clinical cases and discussion.

#### ELECTION OF OFFICERS

##### *President*

Dr. N. L. Spengler, Tampa.

##### *Vice-Presidents*

Dr. H. A. Day, 1st V.-P., Orlando.

Dr. H. K. Murphy, 2nd V.-P., Mulberry.

##### *Secretary-Treasurer*

Dr. R. C. Black, Plant City.

The membership of this Society consists of 128 physicians from the towns of the west coast of Florida. The attendance at the meetings of this Society ranges from forty to one hundred men.

The meetings are held on or about April 15th and October 15th, each year. The meeting place is selected by the officers of the organization. In the last few years this Society has grown from just a few to its present membership, which is drawn from almost every town and community on the west coast. It affords an additional opportunity to members of the medical profession of this section to get together and become more thoroughly acquainted, and to discuss scientific problems as they relate to its members.

(Continued on page 268)

# CONSTIPATION

## *In the Breast-Fed Infant*

**HORLICK'S MALTED MILK**  
has long been used with success  
in the prevention and correction  
of constipation among  
breast-fed infants

## *For the Nursing Mother—*

Many doctors advise the nursing mother to drink regularly each day three glasses of Horlick's—the **Original—Malted Milk**, knowing that she will add to her own store of energy, increase the flow of her breast milk and provide her child with the food elements which result in regular bowel movements daily.

## *For the Breast-fed Baby—*

Supplementary feedings of "Horlick's" almost invariably bring relief to the child and rest to the mother, even in stubborn cases of constipation.

Clip out this coupon and return for a supply of samples.

Name..... M.D.

Address.....

**HORLICK • Racine, Wisconsin**



## Brawner's Sanitarium

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A modern neuropsychiatric hospital with special laboratory facilities for the study and treatment of early cases. Also a department for the treatment of drug and alcoholic addictions.

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These district societies are becoming quite popular over the State as a similar society has been recently organized on the east coast.

\* \* \*

Thirty members of the Interstate Post-Graduate Association recently visited St. Augustine following the convention in Atlanta.

\* \* \*

The surgeons of the Frisco Railway System recently held their 27th annual meeting in Pensacola.

Dr. Clarence Hutchinson, of Pensacola, officially tendered to the organization, on behalf of Mrs. Annie Conway, a prominent Pensacolian, a five-acre tract of land to be used by the organization for the construction of a fishing and hunting lodge.

Dr. Chas. A. Huffman called for an expression on the matter from the assemblage, and a rising vote was given in favor of accepting the gift and taking steps to erect the lodge in the near future. The tract is located on the gulf near the city.

\* \* \*

The annual banquet of the Florida Medical Association will be held on the last evening of the session, instead of Tuesday evening as heretofore.

\* \* \*

Dr. A. M. C. Jobson and family, of Tampa, are in New Orleans where Dr. Jobson is doing some special work at the Post-Graduate School.

#### JOHN DIXIE WATKINS

Dr. John Dixie Watkins was born in Ellijay, Georgia, July 18, 1864, and received his preliminary education in that community. He entered Emory University in 1883, from which he graduated in 1886. Dr. Watkins then practiced his profession at Blue Ridge, Georgia, from 1888 to 1892. He was married to Miss Lillian J. Barr of Micanopy, Florida, in 1891. He died at Micanopy, December 12, 1927.

Dr. Watkins held many positions of trust during his residence in this state. He was a member of the Florida Legislature, session of 1899; a member of the Board and later chairman of the Board of Trustees of the East Florida Seminary at Gainesville; a trustee of Emory University for several years. He was affiliated with the American Medical Association, the Southern Medical Association, the Florida Medical Association and the Alachua County Medical Society.

(Continued on page 270)

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Dr. John E. Hall of West Palm Beach announces the removal of his offices to Miami, taking effect the first of November. His practice is limited to urology, genito-urinary diseases. His offices will be located in Huntington Building.

\* \* \*

Dr. Frederick J. Waas, president of the Florida Medical Association, gave a very interesting talk before the Jacksonville Kiwanis Club, Wednesday, October 31st, on "Medical Ethics." It was plainly demonstrated that there is no necessity of going outside of the membership of Kiwanis for outstanding speakers.

\* \* \*

Dr. Jack Halton announces the removal of his offices from Jacksonville to Sarasota.

\* \* \*

A very delightful social meeting of the Pinellas County Medical Society was held at the Shrine Club, St. Petersburg, on October 19th. A dinner, followed by a dance, was given by the doctors for their wives. Dr. H. W. Wade, toastmaster, made a speech to the ladies, followed by speeches by several other members.

\* \* \*

The following Jacksonville doctors were among those in attendance at the recent meeting of the Interstate Post-Graduate Medical Assembly at Atlanta, Georgia: J. B. Black, T. Z. Cason, B. A. Chapman, S. E. Driskell, Stanley Erwin, Herrman Harris, Luther Holloway, Edward Jelks, Louie Limbaugh, R. H. McGinnis, C. B. Mabry, Geo. Mitchell, Ferdinand Richards, C. D. Rollins, H. D. Van Schaick, E. W. Veal, Frederick J. Waas.

\* \* \*

Dr. Eugene B. Elder, for more than a year superintendent of the city-owned hospital at Lakeland, has resigned, effective December 1, to go to Knoxville, Tenn., as superintendent of the city hospital there.

\* \* \*

At its sixteenth annual meeting, held in St. Petersburg, Friday, October 5th, the Pinellas County Medical Society elected the following officers:

President—Dr. H. W. Wade, St. Petersburg.  
1st Vice-Pres.—Dr. H. E. Winchester, Dunedin.  
2nd Vice-Pres.—Dr. R. K. O'Brien, St. Petersburg.  
Secretary—Dr. O. O. Feaster, St. Petersburg.  
Treasurer—Dr. W. G. Post, St. Petersburg.



## When Disaster Rides the Skies



THE poster which Chapters of the American Red Cross will display throughout the country from November 11 to 29, inviting the people to join the Red Cross for another year, symbolizes the services of relief and rehabilitation provided by the "Greatest Mother" when disaster strikes.

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\*Gold & DeGraff, Jour. A. M. A., March 31, 1928.

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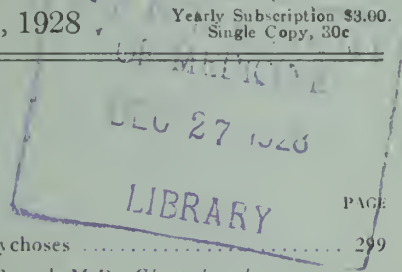
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NO. 6

Jacksonville, Florida, December, 1928

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### CONTENTS

	PAGE		PAGE
Acute Intestinal Obstruction . . . . .	287	Pellagra With Psychoses . . . . .	299
<i>Herman Watson, M.D., Lakeland</i>		<i>J. H. Pound, M.D., Chattahoochee</i>	
Peritonitis Complicated with Acute Ileus . . . . .	289	Belfield's Operation . . . . .	302
<i>A. O. Morton, M.D., Sarasota</i>		<i>John E. Hall, M.D., West Palm Beach</i>	
Artificial Feeding of Infants Under One Year of Age . . . . .	294	Oral Foci of Infection . . . . .	305
<i>L. W. Martin, M.D., Punta Gorda</i>		<i>Jos. B. Game, Jr., D.D.S., Tallahassee</i>	
Roentgen Diagnosis of Pulmonary Tuberculosis . . . . .	298	Editorials: (1) Our Guests Are Coming; (2) Effects of Climate . . . . .	309, 310
<i>L. W. Cunningham, M.D., Jacksonville</i>		State News Items . . . . .	310-318



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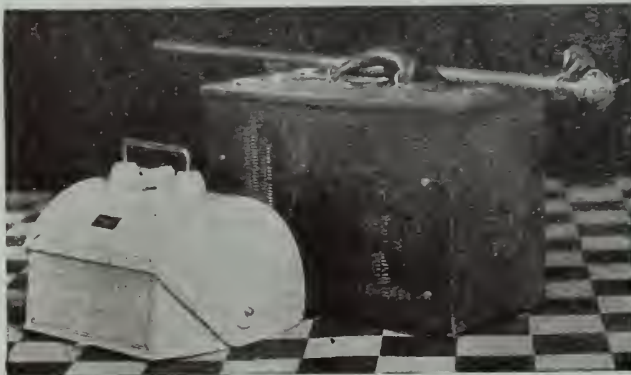
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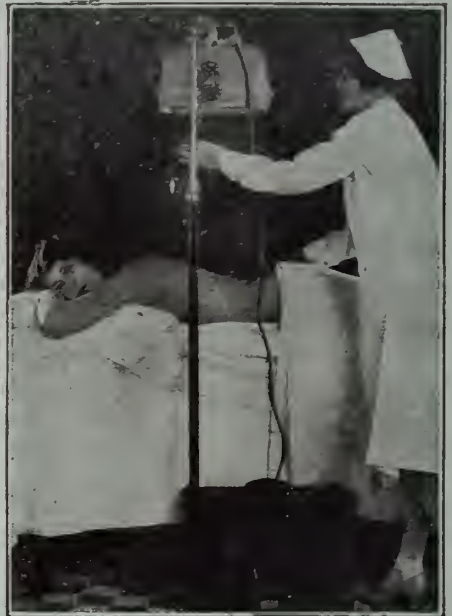
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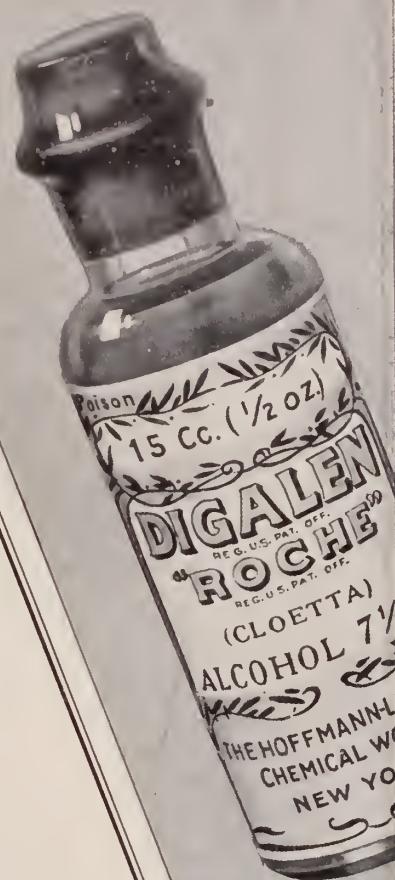
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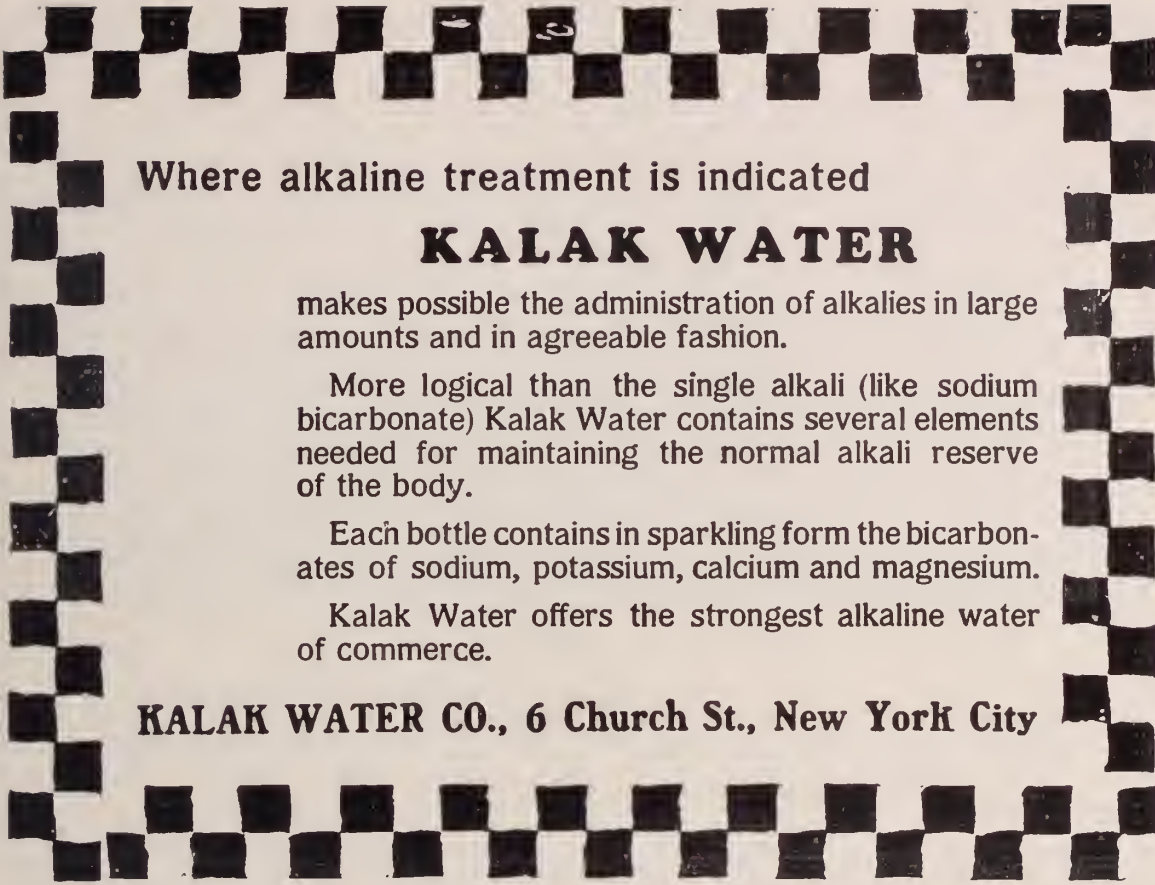
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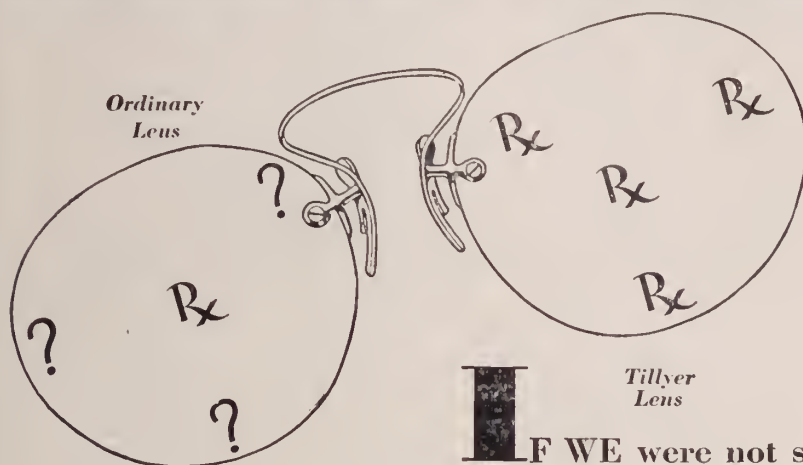
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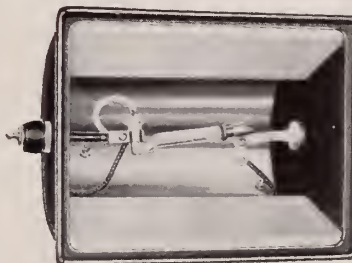


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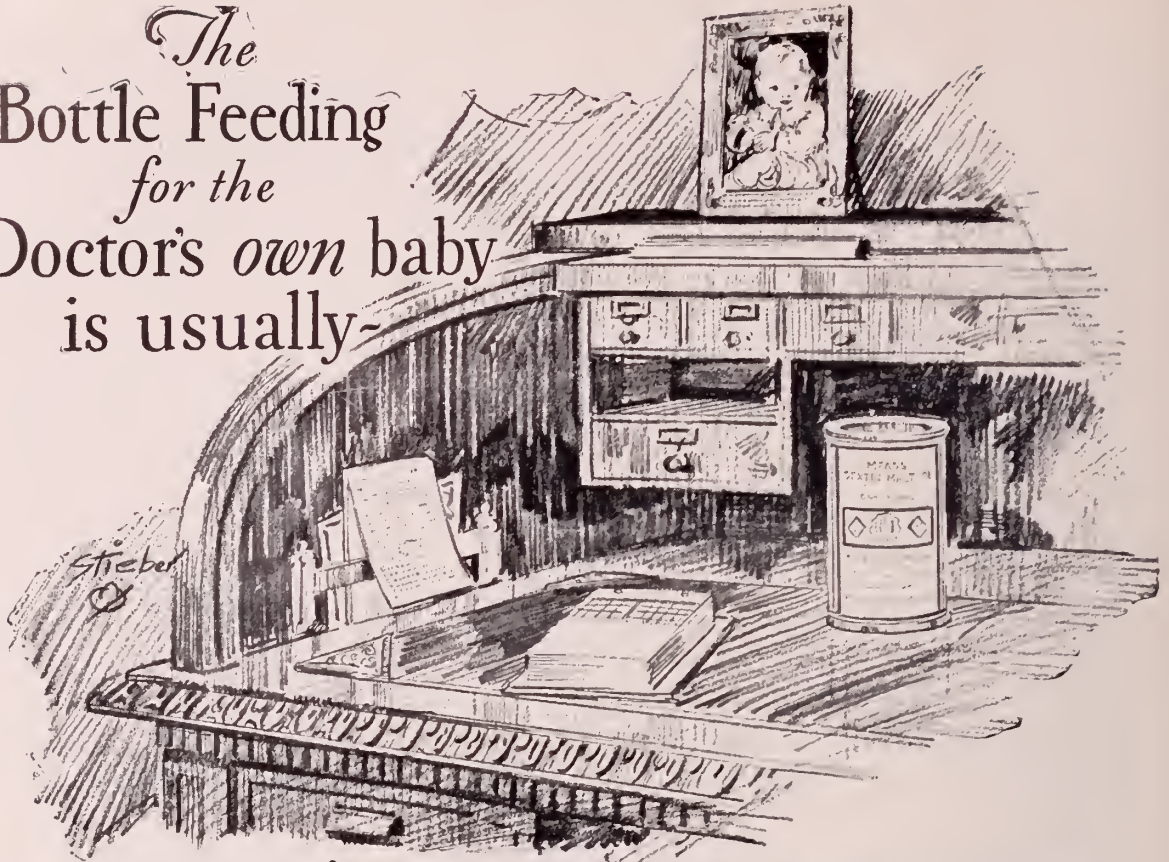
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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

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## ACUTE INTESTINAL OBSTRUCTION\*

HERMAN WATSON, M.D.,  
Lakeland.

The presentation of this subject was not prompted by any hope that it might add anything to the voluminous literature on the subject, but rather by a desire to keep before you a condition which is amenable to treatment, but which in spite of this fact has a very high mortality.

No age is exempt from acute intestinal obstruction, as the newborn child may have obstruction due to malformation or failure of development, while the older child and adult present a multiplicity of possible causes, ranging from congenital defects in the young to carcinoma in the aged. Among causes of obstruction are congenital atresia, congenital bands, intussusception, worms, volvulus, tumors within or outside lumen of bowel, adhesions, inflammatory or postoperative, fecal impaction, gall-stones, appendicitis and hernia.

Orr and Haden<sup>1</sup> have done some interesting experimental work, determining the chemical changes in blood occurring in intestinal obstruction. Using dogs in which they produced obstruction they found a constant rise in the non-protein nitrogen and urea nitrogen, a fall in the chlorides, and a rise in the carbon dioxide combining powers of the plasma. The animals lived from five to nineteen days. In a second series, where an obstruction of the jejunum was produced and jejunostomy done simultaneously, the length of life varied from three to five days, and the chemical changes developed rapidly and were typical of those found in high intestinal obstruction. In another series the animals were subjected to the same procedure and treated with sodium chloride from the beginning of the experiment. In this series they did not show the chemical changes in the blood characteristic of jejunal obstruction, and lived from three to twelve days. In another series jejunostomy was not done until development of toxemia. The animals developed characteristic blood changes and duration of life was from four to fourteen days. In still another series, in which jejunos-

tomy was not done until toxemia developed, but was followed by the administration of sodium chloride, the animals developed the chemical changes characteristic of obstruction and lived from thirteen to eighteen days. This was followed by the interesting experiment of performing a simple jejunostomy upon dogs that lived only from two to five days, and which showed a decrease in the blood chlorides and a rapid rise in urea and non-protein nitrogen. Orr and Haden also found a rise in the non-protein nitrogen and a diminution in the chlorides of the urine.

Many theories have been suggested as a probable cause of death in acute intestinal obstruction, and the intestinal contents and the blood have been subjected to thorough investigations without acceptable explanation. The theory that death is due to bacteremia does not hold true since the blood and organs are sterile following death from obstruction. The theory that the offended intestinal mucosa secretes a chemical poison has not been proven. The theory that death is due to toxemia is the one that has received almost universal acceptance, but the exact cause of the toxemia remains to be determined. Dragstedt et al.<sup>2</sup> found that the normal bowel mucosa had a selective protective action against toxins, but in intestinal obstruction the walls were rendered more pervious to toxins because of impaired nutrition. Williams of London<sup>3</sup> made an investigation upon the assumption that toxemia was due to anaerobic organisms in the intestinal tract. *Bacillus Welchii* was the most abundant and most constant of toxin producers, and were present in the obstructed bowel in enormously increased quantities. The presence of *bacillus Welchii* in the contents of the bowel was demonstrated by animal inoculations. Of thirty-two inoculated mice lethal effects were obtained in twenty-one. As a test of the presumption, mice were treated with antitoxin serum and a marked improvement followed. It is also interesting to note that marked improvement followed the use of antitoxin serum in cases of paralytic ileus. Saito<sup>5</sup> is of the opinion that the pancreatic juices display the most powerful toxic activity at the moment of flowing into

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the duodenum, and that the bile, on the other hand, plays a physiologic part by inhibiting this toxicity of the pancreatic secretion. In fatal cases of intestinal obstruction toxic substances which are formed in the duodenum by activation of the pancreatic juices are absorbed through the mucous membrane and given entrance into the circulation, the inhibiting activity on the part of the bile being insufficient. He is also of the opinion that the real cause of the rapid death of animals with a duodenal obstruction should be sought in the perverted condition of the small intestine, mainly below the obstruction.

Gerard,<sup>6</sup> in his review of literature and in his investigations, thinks that poisons may be developed in the absence of food, bile and pancreatic and gastric juices, and in the absence of a secretion peculiar to any portion of the intestine, therefore the toxicity must be due to products of protein decomposition. The most important of these derived products—proteoses, peptones, kyriins, vasodilatiners and the amins—being formed by bacterial action, and include many poisonous substances.

Stone<sup>7</sup> found that in obstructed loops of intestine, so prepared that they did not contain food, bile, pancreatic and gastric juices, there was formed a material, which when diluted and sterilized and injected into animals, produced a characteristic effect.

The cause of death in acute intestinal obstruction is probably due to a form of chemical intoxication, the production of which is not definitely understood.

The successful termination of intestinal obstruction depends upon the alertness of the physician in charge during the first hours of the illness, and though it is not always an easy matter to make a diagnosis, he should have the symptoms of this condition forever in the forefront as a warning, which if disregarded means so much to the patient.

The onset is usually marked by pain, which is more or less general. This is frequently followed by evacuation of the lower bowel, which will sometimes mislead the physician as well as the patient. Vomiting is a constant symptom, first of the stomach contents, then intestinal contents. The pain in intestinal obstruction is colicky in character, which differs from pain due to damaged or offended peritoneum which is constant in character. The pain in intestinal obstruction is due to distended bowel and nature's

effort to overcome the obstruction, and we would expect to find evidence of this peristalsis in audible rumbling, or borborygmus above the point of obstruction. We sometimes find visible peristalsis, which differentiates from paralytic ileus where we have visible coils without peristalsis. The patient's temperature remains about normal and the pulse rate and volume good. It is in this stage that diagnosis should be made and treatment instituted. Every case with pain, vomiting, obstipation and borborygmus should be considered as a case of intestinal obstruction until proven otherwise. As the disease progresses the patient may become fairly comfortable, which again may mislead the physician, the mind keenly alert, pulse rate begins climbing and temperature dropping, extremities become cold, and skin clammy. These are symptoms of the terminal stage, and death soon intervenes.

The treatment is always surgical and should be considered urgent. The longer the obstruction has existed, the higher the mortality, and the more important<sup>8</sup> the diligent care of the patient. One must not be misled by the evacuation of the lower bowel or by the return of feces following enema and the temporary relief this often affords. Chemical examinations of the blood should be made every few hours in questionable cases, as an aid in determining the extent of treatment.

In cases in which toxemia has developed saline solution should be given, by hypodermoclysis, before operation, and as the patient is being prepared for operating table glucose should be given intravenously, followed by insulin hypodermatically. All cases should receive gastric lavage before operation and duodenal tube left in place during the operation. If operated on early, all patients may have general anesthetic, but in late cases local anesthesia should be used. It is difficult, however, to make thorough examination of distended abdomen under a local anesthesia, and gas oxygen anesthesia may be added if deemed advisable. Free incision should be made to permit examination of intestines with as little effort as possible, and the site of obstruction should be quickly found and cause of obstruction and condition of bowel determined. If early operation is being made, that is within the first six or eight hours, removal of cause is all that is required, and abdomen may be closed. If, however, the gut is distended with fluids, an enterostomy should be done. If the viability of



the gut is questionable and the patient's general condition is poor, the involved segment should be delivered and an enterostomy of the normal bowel done. It is here that the judgment of the surgeon is taxed, as the mortality is so high in late cases we are inclined to criticize ourselves for either doing too much or not enough.

Postoperative treatment is very important and should be begun immediately. This consists of administration of saline solution by hypodermoclysis and by rectum, and of glucose solution intravenously. Gastric lavage should be done as soon as patient recovers from anesthetic, and in cases where resection has not been done, two ounces of castor oil introduced through tube.

Summary: The cause of death in intestinal obstruction has been the subject of careful investigation without explanation of universal acceptance. We are dealing with a condition in which, if treatment is instituted early, it is fairly satisfactory, but if late, it is very unsatisfactory. The responsibility in the majority of cases rests first upon the physician, as the outcome of the case depends upon early recognition. The surgical treatment depends upon the degree of toxemia and the condition of the gut, and demands sound judgment on the part of the surgeon. Not infrequently patients who have intestinal obstruction have the assurance that operation will restore them to health and happiness, but a few hours later we find that health has not been restored and happiness a matter of conjecture.

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#### PERITONITIS COMPLICATED WITH ACUTE ILEUS\*

A. O. MORTON, M.D.,  
Sarasota.

The treatment of peritonitis and its complications has been one of the "bugbears" of the abdominal surgeon for many years. One procedure after another has come into vogue but most of them have been discarded after due trial. During the past year at the Sarasota Hospital we

have had several cases of general peritonitis, most of them complicated with acute or marked ileus; all but three died. In discussing these cases with one of my colleagues, I made the remark, that hereafter I would perform an enterostomy, at the time of operation, on all doubtful cases; that is, in cases which showed marked peritoneal involvement and more or less ileus.

Victor Boney<sup>1</sup> writes: "I hold strongly that all cases of paralytic obstruction, whether primary or secondary to an organic obstruction or to a peritonitis, when advanced to the stage of fecal, or short of fecal, intestinal vomiting, should be treated by jejunostomy. By making an opening into the jejunum, in a case of fecal or intestinal vomiting, the source of the vomit is directly tapped and free drainage of the toxic material is established. No patient should be allowed to die with fecal vomiting, if it is possible to perform this operation."

Dr. Donald McCrae,<sup>2</sup> in a recent article, makes the following statement: "I have now practically discarded drainage of the general peritoneal cavity, but have established, almost as a routine, draining of the intestine in all doubtful cases. As a consequence my mortality in this desperate type has been reduced at least 50%. Drainage of walled off collections of pus or extra-peritoneal cellulitis, or the insertion of foreign material into gangrenous or suspicious locations in order to render the part extra-peritoneal, must not be confused with the contamination of the peritoneum itself, which does not require drainage, for the very good reason that such drainage is impossible."

Let us turn for a moment and review briefly the pathology of peritonitis. The peritoneal cavity may be regarded as a great lymph sac, lined throughout with pavement epithelium. Its chief function in health is to secrete a serous fluid which allows the viscera to glide upon each other with the least possible friction. This fluid is constantly being secreted and reabsorbed through the lymphatics of which there is a bountiful supply and most poisons or extraneous matter are effectually taken care of by the lymph glands.

If this sac receives an overwhelming infection, as for instance a virulent streptococcus involvement, the toxins are rapidly absorbed, the protective lymphatic glands are overpowered and the patient receives a fatal dose of toxins; the exudate does not coagulate and block off the

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lymphatics. At autopsy such a peritoneum shows very little evidence of inflammation.

Treatment in these cases is of little avail. We may open the abdomen and attempt drainage, even massive gauze packs, but these only do good locally by producing an inflammatory reaction which blocks off a few lymphatics with which they come in contact. The whole peritoneal cavity can not be drained. Our chief hope lies in supportive treatment which will allow the system time to develop antibodies or antitoxins to combat the toxemia. Commercial antitoxins or chemical substances may be developed later which will stem the tide, but as yet we have nothing specific.

Now on the other hand, if the infection be of a milder type, say, by staphylococci, pneumococci, or colon bacilli, the peritoneum has time to react and throws out an exudate rich in fibrin, which coagulates and effectually seals off the lymphatics, thereby rendering the peritoneum a non-absorbing membrane. The patient may receive a small dose of toxins at the beginning of the infection, but later very little absorption takes place. This exudate not only closes up the lymph vessels but tends to wall off the infection and limit it to a portion of the peritoneal cavity.

Our early training and teaching has always laid stress on the peritoneum as being the avenue by which toxins entered the general circulation, but recent studies have proven that this theory is not correct. An inflamed peritoneum absorbs very few, if any, toxins.

We have failed to take into consideration the absorbing power of the twenty or more feet of the mucous membrane of the small intestine and colon. If we are to have a broad view of this condition we must always have in mind the intestinal mucous membrane. We must think beyond the peritoneum.

The normal intestinal mucous membrane will absorb very few toxic substances, but here we have a membrane, inflamed, stretched almost to the breaking point, whose cells being in various stages of degeneration are unable to check the absorption of poisonous materials.

It is generally conceded that even a slight peritonitis will produce an ileus; this will vary in degree with the virulency of the peritoneal involvement. Monihan, after his vast experience, says "there is no appendicitis without obstruction." Dr. W. J. Kennedy, in a recent article, says, "Peritonitis per se would often win the

fight, a physiological process, were it not for bowel obstruction."

What causes the obstruction? Probably the first dose of toxins absorbed paralyzes or weakens the musculature of the intestine, and also interferes with its nerve supply. On top of this is the involvement of a loop or loops of intestine in the abscess wall or cavity. Exudation and migration take place into the subserous and muscular walls of the gut, the segment becomes paralyzed and distended, and the obstruction takes place, partial or complete.

Now we have an ideal condition for the intestinal flora to multiply. Probably the poisons are produced in the upper part of the intestine by the bacterial action on proteids and their split products. A distended bowel and impaired nutrition renders the gut more pervious to toxins.

There is more or less evidence, though unconfirmed, that the toxemia in acute intestinal obstruction is due to the absorption of anaerobic toxins from the small intestine; the bacillus Welchii is the most constant of these organisms and may be the chief offender. The administration of antitoxins made from the bacillus Welchii has proved of distinct value in cases of paralytic ileus.

Besides the intense toxemia in these cases we have also to take into consideration dehydration. It is estimated that seven to ten quarts of water are secreted by the upper intestinal tract, in twenty-four hours, and if the patient is vomiting, this loss of water must be made good or a fatal termination will result.

There have been a great many experiments on dogs, to show the toxicity of the intestinal contents in cases of obstruction, but with rather unsatisfactory results as to the time required to produce a fatal toxemia.

Recently Van Buren<sup>3</sup> reported the results of experiments on five dogs with intestinal obstruction of two days' duration, and five dogs with obstruction of three days' duration, as follows:

The intestinal contents from every one of the ten obstructed dogs caused toxemia when injected intravenously into a presumably healthy dog. In one case the symptoms (vomiting, purging, and general depression) were slight. In five cases they were severe. In four cases death resulted in from 2 to 6 hours after the injection.

We feel justified, therefore, in assuming that at the end of 48 hours, even in simple obstruc-

tion, with little intestinal damage, there is usually poison in the obstructed intestine which is probably being absorbed and which ought to be removed.

Accordingly, we recommend that enterostomy be done as routine in mechanical ileus cases that have been obstructed for 48 hours, but we have insufficient data as yet to support such a recommendation.

Orr and Hayden,<sup>4</sup> in their experiments on dogs, show the following chemical changes in the blood in high intestinal obstruction:

A constant rise in the nonprotein nitrogen and urea nitrogen, a fall in the chlorides, a rise in the carbon dioxides combining power of the plasma. Following these observations, experimental jejunostomy was tried to observe its effects as compared with those of the administration of sodium chloride solution, and to determine its value in intestinal obstruction. The authors came to the following conclusions:

Jejunostomy does not prevent the chemical changes characteristic of obstruction, neither does it prolong life, but the administration of sodium chloride solution tends to prolong life regardless of jejunostomy.

It will be seen that these experiments on dogs do not agree with the mass of clinical evidence in favor of enterostomy.

In nearly all cases of ileus due to peritonitis, the upper jejunum will be found filled with fluid, which contains the toxic material. This is due to the fact that the intestinal current is reversed. The rest of the intestine is ballooned out with gas. I believe that it is this toxic fluid that is the chief factor in the fatal termination of these cases.

It is not the peritonitis that kills, but the peritonitis produces obstruction, and it is the toxins, inside, and not outside, the gut, that brings about the fatal termination.

As we all know, gangrenous appendicitis is the most common cause of peritonitis, and in order to avoid the complications of paralytic or mechanical obstruction, we should operate on these cases, as soon as a diagnosis is made, whether it be 24 or 48 hours after the first symptoms.

I know that this view will not meet the approval of all my colleagues, but let us for a moment consider the conditions as they exist in a case of ruptured appendix. The distended abdomen means just one thing—obstruction,

partial or complete. The virulent germs are present in the mucous membrane of the appendix, which must infect the mucous membrane of the bowel. Add to this the obstruction and the absorption of the toxins from the damaged mucous membrane, and you have every element for a fatal toxemia.

I do not believe that the inflamed peritoneum absorbs toxins to any great extent. It is true that the inflamed appendix situated in the right iliac fossa between the abdominal wall and the cecum may perforate the abscess, become walled off and the patient go on to recovery with a late operation. Unfortunately we can not tell where the appendix is located. If it is retrocecal and deposits its infection behind the cecum, in a region rich in absorbents, with none of the protective elements of the peritoneum, the patient often succumbs to a fatal toxemia, unless the appendix is removed early and the region drained.

A perforated appendix in the ileocecal fossa and in the pelvis soon is surrounded by one or more loops of intestines which come in contact with the purulent fluid; their peritoneal and muscular layers soon become infected and obstruction results.

"The only safe place for an inflamed appendix is in a little bottle on the mantle, and the sooner it is placed there, the better it will be for all concerned."

Another source of paralytic ileus, and to my mind one of the greatest in importance, although I make this statement with the greatest humility, knowing full well that the stand I take is not popular, is the habit of the majority of surgeons of giving their patients a hypodermic of morphine before the operation. Why? Because it makes the work of the anesthetist easier. Any anesthetist who with a few kind words and a friendly touch cannot win the confidence of the patient, and quiet his fears, should seek other work.

Does the morphine deaden the receptive centers of the brain, thereby lessening the danger of shock? I do not believe so to any appreciable extent.

Yates and Rain,<sup>5</sup> in a recent article, state that opiates produce a slight alkalosis, and so counteract in part the acidosis caused by the anesthetics, and recommend pantopon as the drug of choice.



According to Hare, opium depresses the motor activity of the intestines, by stimulating the splanchnic inhibitory fibers, thereby preventing peristalsis. This is the first stage of obstruction.

How silly it seems when viewed from this angle to give a drug which inhibits peristalsis when we are fighting as hard as we can to cause the bowels to move.

I know that in my experience, abdominal cases do better without morphine, either before or after operation. I have had many less distended abdomens since discontinuing or limiting the use of the drug.

Rough handling of the abdominal contents at the time of the operation is also a very fertile cause of obstruction.

From what has been said, it will be seen that probably the most prolific source of poisoning is in the upper part of the small intestine. Our chief aim should be to drain this area, and as it has been shown that the toxins develop in dangerous quantities within 48 hours, we should drain early.

The incision, under local anesthesia, should be made through the outer border of the left rectus muscle, the peritoneum opened, the finger inserted into the abdomen, the ligament of Treitz located, then the finger follows the upper jejunum down for about twelve inches, and this portion of the gut, which is filled with fluid, is brought up through the wound. The assistant milks the fluid out of the loop, and holds it, while one or two large-sized catheters are passed into the lumen of the gut and are fastened, using a modified Witzel method. The ends of the catheters are passed through a hole in the omentum and gentle traction made upon them while the wound is being closed.

This procedure is generally followed by an escape of fluid matter and gas, and a great reduction in the size of the abdomen.

If at the time of operating on a gangrenous appendix, we find the bowels distended (a partial obstruction), it would be good technic to reach the hand upward in the abdomen, grasp the highest portion of water-logged jejunum, bring it into the wound, insert a catheter, then passing a forceps through a stab wound in the left rectus, grasp the end of the tube and pull it upward through the wound. As yet I have never used this method, at the time of operation, but I believe in it thoroughly.

By performing a jejunostomy we have drained

the intestines, and have established an avenue of escape for the toxins, but our work is only half finished; the next 24 to 48 hours will tax the strength and resources of the best men.

After the operation, sodium chloride solution should be administered either intravenously or by hypodermoclysis, to replenish the loss of the fluids, and to make up the loss of sodium chloride of the blood.

At the Mayo clinic the following formula is used for intravenous injection:

Sodium Chloride, Gms. 10.

Glucose. . . . . Gms. 100 to a litre of water.

Orr and Hayden attempt to administer 1 gm. sodium chloride per kilogram of the body weight, every 24 hours. Normal saline or hypertonic solution may be injected directly into the jejunum through the tube.

Vomiting is often a distressing symptom, but may aid in relieving the toxemia. Colonic irrigation of alum water may help to relieve the obstructed bowel.

Time forbids my going into detail as to the postoperative treatment, but I wish to mention a few drugs which seem to help:

Eserin at times is an important drug but should be used with caution. Rupture of the gut may occur, and in some cases a reversed peristalsis is set up which keeps the patient vomiting. Pituitrin is a very useful drug, in some cases. Strychnine Gr. 1/30 every four hours is used in all my cases. Morphine should be used, if at all, as if it cost as much as radium.

In closing, I simply wish to mention the use of spinal anesthesia in the treatment of these cases. While the treatment is a new one, a number of observers have reported very good results, probably due to paralyzing the splanchnic inhibitory fibers to the intestines.

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#### DISCUSSION

*Dr. David R. Kennedy, Sarasota:*

I think the subject of peritonitis is one of the most interesting in its development in the last few years. The usual routine when I was an interne in the hospital six years ago was to give them morphine, put them in the Fowler position, give salt solution and glucose by rectum, and let them die on the third day after operation. You

could nearly always count on when you would have their room, if you were crowded for space. At that time I would have been run out of the hospital before my service was completed if I had used the treatment I use now. I got tired seeing them die; being in a small town, with patients and family looking to me, I adopted more radical measures. I think there are three things very important in these cases.

One, and I think the most important, is to keep the patient full of fluids. Every abdominal case I operate on I give 750 cc. of glucose and saline solution in the vein before they awake from the anesthetic; if it is a local, right after the operation. That night, if done in the morning, I give them the same amount in the vein; next morning the same amount in the vein. By keeping up fluid you will prevent a great deal of toxemia which leads to this paralytic obstruction.

The other important thing, don't wait too long to get the bowels started moving; give colonic irrigation next day after operation and a purgative on second day after operation.

The other important thing: if they continue vomiting more than 24 hours and have abdominal distension or pain, no matter how much gas and fecal matter you get from your colonic irrigation, do a jejunostomy, putting one tube in distally, one proximally; give concentrated solution of Epsom salts in that tube, by mouth and by rectum. What I do is take a glass full of Epsom salts crystals, dissolve in 12 ounces of hot water, tell the nurse to keep on using that from a pound and a half of Epsom salts until the salts give out or the patient's bowels move. Like Dr. Morton says, peritonitis is not the thing that kills. Fowler position doesn't mean a thing in my estimation; after this thing has spread it doesn't matter what position they are in. Get the bowels to move and let the drainage be out through the bowels instead of absorbed into the blood stream and liver, where Dr. George Crile says all this toxemia occurs.

*Dr. Kenneth Phillips, Miami:*

I would like to emphasize two points: First, regarding sodium bicarbonate injected into the bowel. Three things accompany these cases, rise in nonprotein nitrogen; a fall in chlorides and alkalosis. The alkalosis is not without importance for consideration. I don't believe I would favor an alkaline injection on top of an already

existing alkalosis. The acidosis resulting from the general anesthesia will probably be beneficial rather than detrimental. Secondly, I don't believe we ought to get too radical with enterostomy. There are a lot of cases where the Rehfuess tube, especially if one is successful in getting it into the duodenum, will often serve for drainage. I have seen it reduce distention, vomiting is invariably controlled and with the injection of lactose peristalsis start up and the abdomen go flat. Enterostomy, in my mind, is rather a last resort, but I want to stress one point already made, and that is, when these cases are late at the time they reach the surgeon, I do think preoperative treatment is important, and to take them in and operate immediately upon admission is almost sure to be fatal. With medical management and a little treatment, I feel quite certain your patient will be rendered in much better condition for major surgery.

*Dr. C. F. Fleming, Bradenton:*

I am interested in this subject matter. I want to mention three points. The picture of intestinal obstruction to my mind has been cleared to a considerable degree by some man, I can't recall his name, who describes the picture in three stages. In the first place, as far as diagnosis is concerned, the first is the stage of shock, like the crushing of a limb, with all the symptoms; the next stage is the stage of peristalsis, in which you get the bowel trying to overcome the obstruction; the third is the stage of toxemia. To my mind that simple classification of the symptoms of intestinal obstruction makes it a whole lot easier to identify your case of obstruction, which to most everybody is one of the bugbears of surgery.

I have been interested in what Dr. Phillips has been talking about in regard to the chemistry of intestinal obstruction. I have in mind one case in which I thought the patient was going to die where I introduced sodium chloride, not in the strength he suggested, but in the strength of either 20 or 30 per cent, introducing an ounce of the sodium chloride of that strength. That was following somebody's suggestion. That patient passed from apparently a hopeless stage into a stage in which it was possible to operate and relieve the obstruction and the patient recovered. I can't help but feel the sodium chloride introduced had something to do with the recovery.

There is just one more thing. Deaver makes the point, which to my mind is important, that these cases of intestinal obstruction can be divided into early and late cases, the early cases divided into the real early and the late early cases. Those cases of obstruction which occur within three or four days of operation are usually at the site of the operation; those cases which occur from ten to eleven to fourteen days following operation are very frequently at a point distant to the site of operation.

*Dr. Herman Watson (closing):*

We have here a deadly malady, if neglected, but one in which the treatment is reasonably satisfactory if instituted early.

Most of us have had patients sent in who have been suffering from acute obstruction for several hours, and who have been assured that an operation would relieve them, that it is a very simple thing and will restore them to health. As many of these cases do not appear desperately ill, their friends, and sometimes their physician, can not understand why they do not get well after operation. They are then, in many cases, at the breaking point and regardless of what is done for them, death rapidly intervenes.

I think Finney says he has a mortality of something like 5% even in cases operated on within the first six hours, and the mortality increases rapidly from hour to hour. The outcome depends upon early operation, and we want cases to come to operation in time for treatment to benefit them.

*Dr. A. O. Morton (closing):*

There are just one or two points I want to stress in closing the discussion. I expected to get a lot of criticism on my opposition to the use of morphine in these cases. I hoped for a general discussion on this phase of the subject. I wish that we would try getting along without morphine in some of these cases in which we used the drug. I think you will be more than pleased with the results. The other point which I wish to stress is that of early high jejunostomy. The operation is simple. If you do it in some cases where it is not absolutely necessary you have done no harm, it takes but a few minutes to do it, and you have got an anchor that may save you worlds of trouble during the convalescence of the patient.

## ARTIFICIAL FEEDING OF INFANTS UNDER ONE YEAR OF AGE\*

L. W. MARTIN, M.D.,

Punta Gorda.

*Introduction.*—There is no question in our age but that nature has provided every young animal with the best possible food in the milk of its mother. This is particularly true of the human species as shown by a comparison of the mortality rate between breast-fed and artificially fed babies, the rate being four times higher in the latter than the former. However, there are times when infants are deprived of all or part of this food, either by death of mother or other causes with which we are all familiar, and it becomes necessary that some substitute for mother's milk be made.

*Mixed Feeding.*—It is necessary to supply only part of the food for a child in cases where the mother has some milk. This is called "mixed feeding," and should be used in every instance possible as only a few ounces of mother's milk may often save a baby's life, especially when they are bad feeders. Physicians should use every means possible to stimulate the milk of mothers before coming to conclusion that there is no milk present. Mixed feeding is most often necessary during the first weeks of life while the mother's milk is insufficient and oftentimes not due to ill health of mother but to the slow reaction on part of glands of breast to stimulation. Thus, no one should decide there is no milk in breast of mother (especially a healthy one) but should persist by letting child suck and stimulate, or by using such artificial means as Abt's breast pump. Two or three feedings a day from bottle will tide a baby over this period of lack of proper secretion of breast, or, if necessary, they can be kept up and baby will thrive as these supplementary feedings are added.

*Substitutions for Mother's Milk.*—All leading pediatricians of the world today agree that cow's milk is our main reliance in artificial feeding of infants as well as one of the best foods for all young children. Goat's milk is used in many countries and in many sections of the United States and has the same composition and possesses some advantages over cow's milk. Goats are cleaner and healthier animals than cows and do not have tuberculosis, but the scarcity of the milk prevents its wide use in this country.

\*Read before the 55th Annual Meeting of the Florida Medical Association, Tampa, April 3, 4, 1928.



Mare's milk which has composition and digestibility nearest to human milk is very good, but its scarcity also makes it impracticable to use.

With the decision of the best food to be used in artificial feeding being in favor of cow's milk, we would think that it would be universally used, but the exact opposite is true and more babies are fed on patent foods than all other foods combined. There are two distinct classes of patent foods—complete and incomplete. The incomplete should never be used except in connection with cow's milk. These foods are highly advertised as the greatest foods on earth for babies and often babies do fatten on them, as they do on other patent foods that contain a high per cent of carbohydrates, but the flesh taken on is not true flesh and often the infants will show signs of rickets and all have poor resistance to disease. Scurvy often follows the exclusive use of incomplete patent foods.

Complete patent foods have been used with success in artificial feeding. However they have all been treated to high degree of temperature, and Vitamin C has been destroyed. Dried milks and some condensed milks are found in this class. Klim is one of the best known dried milks and it takes three level tablespoonfuls of this milk added to eight oz. of water to make 8 oz. equal to composition of fresh cow's milk. Borden's condensed milk is one of the best known complete patent foods put up in liquid form and is prepared by evaporation from fresh cow's milk. Reolac, put out by the Mead Johnson & Company, and being a constructed human milk is being used extensively as artificial food and seems to fill all the requirements of a well-balanced milk.

Patent foods possess some advantages over cow's milk; they are: (1) cleanliness, (2) keep well, (3) require no ice. They should not be used, however, except in cases where cow's milk cannot be gotten or where it is of questionable source.

*Requirements of Cow's Milk.*—Since we are agreed that cow's milk meets the requirements best as regards composition, digestibility and supply, we should see that the following essentials are possessed by the milk we use: (1) freshness, (2) health and personal hygiene of handlers, (3) healthy, tuberculous-free herd, (4) should not be skimmed and no preservatives used, (5) number of organisms should be the minimum.

Herd milk has been found to be the most desirable as it is subject to less variation from month to month than milk from one cow. Milk from pasture-fed cows has been found to possess some advantages also. Butter fat should not be too high but of average per cent.

The composition of cow's milk as compared to human milk is approximately as follows (at least it is close enough for our purpose):

	P	F	S
Human milk .....	1½	4	7
Cow's milk.....	4	4	4

*Methods of Preparation.*—There are many points to learn and keep in mind in feeding a baby and they might be stated as follows: (1) We are feeding a baby, not a test tube. We should not use too much theory but use science plus common sense. (2) Begin with weak formula and slowly increase strength until baby thrives. "Begin Low and go Slow" is a good motto in infant feeding. Begin with approximately 1 oz. of straight cow's milk per pound body weight in babies over 3 months of age. Some pediatricians begin with larger amounts with good results. (3) Increase formula according to hunger of baby, character of stool, gain or loss of weight and general appearance. (4) Cover protein and fat requirements by using cow's milk fattened with sugar. (5) Have formula in a general way check o. k. as regards fats, protein, carbohydrates, salts and vitamins. (6) Use milk raised to boiling point. (7) Give 2 more oz. than child is month of age in formula. (8) Feed as follows: 1st to 3rd month, seven feedings at three-hour intervals. Third to sixth month, 6 feedings at 4-hour intervals. After six months usually five feedings are sufficient. May have to continue six. From the above rules we will proceed to feed baby weaned at five months of age, weight 14 pounds, as follows: Make up total amount for 24 hours at one time. He receives six feedings of seven ounces each—equal 42 oz. Whole milk, 14 oz. Water, 28 oz., no sugar. Boil for 3 minutes, stirring constantly so that there will be no scum, add enough boiled water to make up 42 oz. when finished. Divide into six feedings of seven oz. each, warm before each feeding except in very warm weather when cool milk is very refreshing to infants.

If child takes this well the first day, start a small amount of sugar the second day, also begin adding 1 oz. more of milk and decreasing the

amount of water 1 oz. for a few days. The sugar should be added to formula after boiling and cooling but before it is divided into feedings.

Proteins will give us least trouble of all in this formula as it has been made more digestible by boiling, but we should watch fat and sugar.

The stools in artificially fed babies are different from those in breast-fed infants, being fewer in number, firmer in consistency and varying in color. Too much stress should not be placed on the stools but look for white stools which means fat is not being digested, also watch for loose stools and chaffing of buttocks which means too much sugar. The kind of sugar used possesses no great advantages. All sugars taken into the body are changed to glucose before being absorbed. However, glucose cannot be used successfully except in acid milk. Milk sugar is used by some but is more costly than cane sugar, over which it possesses no known advantage, and is more likely to adulteration. Malt sugar helps in constipation due to fat indigestion.

Each baby is a rule unto himself as to how much and in what concentration he can use milk and its different constituents. But we feel safe if the following goals have been reached:

0-3 mo. of age	.....	1/2 strength
3-6 mo. of age	.....	2/3 strength
6-8 mo. of age	.....	3/4 strength
8 mo. of age	.....	Full strength
For summer use	.....	3/4 strength

*Starting Newborn or Premature Baby.*—So far we have said nothing of feeding newborn or premature infants. If the child weighs under 5 lbs., some human must be gotten for two or three feedings a day or baby will in most instances die. Some mother, even though she does not live next door, can express some milk into bottle and send to infant. In some of the larger cities of this country many women make their living in their own home by sending a few ounces of their own milk to start premature infants. In feeding newborn babes, of course same principles apply as stated but baby's stomach is much more delicate and stomach will need more training, thus we must start on very weak formula, using skimmed milk which if tolerated is made stronger by adding cream. Fats give most trouble in these cases and infant should be watched closely for sour vomit, which is nothing more than fat vomit, also watch color of stools.

Start newborn baby:

Skin milk, 5 oz., increase 1/2 oz. until 10 oz.

Water, 15 oz., decrease 1/2 oz. until 10 oz.

Start and feed 2 oz. every 2 hours. When baby has been trained to take the above and with the addition of cream, sugar should then be tried in small quantities.

*Other Necessary Articles of Diet.*—Cow's milk contains all the mineral salts necessary to building up of body. Many of these substances are in great abundance, there being three times more than is assimilated; thus it is not necessary to give lime water as was once done to furnish this substance. However, it is good to use in case of vomiting.

Water should be offered every child several times a day between feedings. This is especially imperative in the summer months.

Regardless of what baby has been fed on, orange juice (preferred) or cabbage pot licker, strained tomato juice (cooked) or fresh grape juice, all diluted, should be given in small quantities, teaspoonful at age of three months and gradually increased in amount and concentration.

*Addition of Foods Other Than Milk.*—Infants that have progressed nicely can be started on outside feeding at six months, some earlier. The following can be added at months stated, with no trouble, but each article added should be an experiment and if it does not agree with child should be withdrawn. Remember when baby is started on new diet he may lose appetite and be sure not to give him calomel or other drug, thinking he has had an intestine upset.

At 6 months, one artificial feeding, zwieback.

At 7 months, cream of wheat, oat meal or other well-cooked cereal. Campbell's tomato soup.

At 8 months, vegetable mash, 1/4 coddled egg.

1 oz. scrapped beef and worked up.

At 9 months, baked apple, soft boiled egg.

Well cooked mashed vegetables.

At 10 months, prune pulp, bacon strip (crisp).

At 12 months, 3 meals per day as follows:

Breakfast, orange, cream of wheat, cracker, glass milk.

Dinner, strip bacon (crisp), tomato soup, crackers, vegetable mash, baked apple, potato, milk.

Supper, milk, cracker, toast, soft boiled egg, baked apple, or prune pulp.

There are five classes of food, one of which from 9 mo. to one year on should be included in some meal during day.

1. Milk (clean), skim if too rich.
2. Cereal (only cooked).
3. Cooked vegetables (starchy and green).
1. Fruits (cooked apples and oranges are best).
5. Bread.

### DISCUSSION

*Dr. J. D. Love, Jacksonville:*

Mr. Chairman, it has been well said that babies must be fed with brains rather than any one milk for food. Babies cannot be fed by rule of thumb. If this were so, pediatricists, as specialists, would have a limited field of activity. All babies require to be fed as individuals and not as a class.

Pediatricians are never so wed to any one food as to deny the virtues that exist in others, and most of the foods that are used at the present time can be made acceptable with certain additions or alterations.

The essayist has mentioned certain requirements; he has mentioned certain essentials, and if I may be allowed to do so I shall point out four things which I consider to be essential to a perfect food. I am borrowing from Dr. Marriott when I do this.

1. It must have a sufficient number of calories.
2. It must be easily digested, because it makes no difference how many calories the food may have if it is not easily digested the baby either suffers from malnutrition, lack of assimilation or some serious disturbance of the alimentary canal.
3. The third essential is that the food must contain all the food elements, the fats, carbohydrates, proteins, water, salts and vitamins. Unless it contains all these elements it is not a properly balanced food.
4. The fourth essential is that it must be reasonably free from all bacteria of a harmful nature.

If all these essentials are fulfilled the food is a perfect one for the baby, and it makes no difference whether it comes from a can or a bottle, whether it is fresh or boiled, whether it is lactic acid milk or milk diluted with lemon juice, it makes no difference what name you place on it; it is a perfect food.

*Dr. Wm. Edson Ross, Jacksonville:*

I think that we all agree on the subject that when we cannot get breast milk cow's milk is the best that can be used; (no question about that.) The doctor stated some of his ideas about quan-

ties of milk. He said he feeds one ounce of cow's milk per pound weight of infant in a day of twenty-four hours. I do not see how he gets away with it. I think the majority of babies ought to have at least one and one-half or two ounces to give them the needed calories and that should be given with sufficient water to make up their total daily quantity of intake. I am very fond of the lactic acid system of feeding. I use nothing but cow's milk; I do not use artificial foods, and lactic acid feeding has been the easiest solution of feeding babies of anything I have found in my practice.

Personally I do not follow exactly the principles of Marriott who worked up the lactic acid theory. That gives us a food of buttermilk consistency. At first I started using the full quantity of lactic acid, but I have gradually worked that down until I feed my babies on the same formulas of protein fats and carbohydrates that I always did. I now use about one-eighth as much lactic acid as formerly. It is theoretically best to give full buttered milk, but in this way you get exactly the same results from lactic acid milk. This avoids a great deal of the trouble we have in getting an infant to take a thick buttermilk properly prepared.

Technically I am wrong; it should be brought up to where Marriott brought it, but in practice lactic acid milk or buttermilk as it is given is very hard for the mother to make and if you can gradually work down and dilute the acid before you add it to the milk you will not have a quantity of curds; you will have absolutely no curds in this whatsoever.

I had a very interesting case a few months ago. It was a premature baby that weighed two pounds and seven ounces. This baby was put on skimmed milk and water, equal parts, from birth; it took one drachm every hour; its weight went down only to two pounds and five ounces. As far as I have been able to find that is about the record of a baby still living; (and it is still living and weighs four pounds and five ounces.) We then added two parts of skimmed milk and one of water and small quantities of Karo with the small quantity of lactic acid to it. Lactic acid feeding is the simplest I have used and I think you can get just as good results with much less quantity of the acid, and get the same lactic acid stools if the milk is very cold when the acid is added to it.



*Dr. Luther Holloway, Jacksonville:*

With regard to the numerous brands of artificial foods on the market which the manufacturers recommend very highly, I want to throw out a word of caution. Drs. Dick and Dick of scarlet fever fame have grown cultures of pathogenic organisms from nearly all of the dried preparations of milk. We all know of the high mortality rate of premature infants. With these little fellows, where there is an absence of mother's milk, we have been successful with the use of fat-free milk, with the lactic acid modifications as a starter. Nearly all of these babies have a lowered tolerance for food, especially the element fat. Their ability to handle food is very much lessened and so in feeding these babies bear in mind that very small amounts of a weak mixture is best to feed at first with a gradual increase of strength of the food as the individual baby can tolerate same.

#### ROENTGEN DIAGNOSIS OF PULMONARY TUBERCULOSIS\*

L. W. CUNNINGHAM, M.D.,  
Jacksonville.

The roentgen examination of the chest can be of the greatest assistance when properly and carefully done. The fluoroscope alone should never be relied upon to prove the absence of lung pathology. The eye, with the most acute vision, may not note minute changes in the lungs that the sensitive film will clearly record. Frequently the pathology present is symmetrical in its distribution so that the illuminated lung as seen with the fluoroscope is evenly lighted. The variations in illumination are what the eye records and is what one expects when pathology is present. Later, when one sees the films in such a case, one is surprised indeed. If the fluoroscope alone was depended upon in such a case, an error of diagnosis and treatment would result.

Flat films may be of value where stereoscopic films are also made; but flat films alone should not be depended upon for accurate diagnosis. It requires for careful work the perspective which one secures in stereoscopic films to clearly visualize the faint changes from the normal that are present in early cases of tuberculosis. Stereoscopic films made in the anteroposterior axis and posteroanterior axis are necessary to clearly see all the lung area. These are augmented by the information obtained with the fluoroscope. Flat

films, made in special angles, may be of additional value and help. Stereoscopic film examination, plus that of the fluoroscope, represents a complete roentgen examination of the chest.

Lung pathology manifests itself as an increase of density on the film and to be of real diagnostic value should lie in the area known as the cortical lung. Changes about the hilus or root shadows are more likely variations of the normal, rather than actual pathology. If they are coincident with cortical pathology, then they are significant. The pathology of pulmonary tuberculosis is most often situated in the apical lung, or in the upper lobes. It, however, frequently begins in the middle third of either lung. It does occur, and may be limited to the base of the lung. Basal tuberculosis is more frequent than thought to be and is easily mistaken for some other lung condition as it has no typical appearance. Cavities of the lung when noted are most likely tuberculous, but they are found in other diseases. We must especially keep before us lung abscess. Lung abscess following the removal of the tonsils occur too frequently. Its first symptom is, at times, a hemorrhage. Cough and fever may be present previously but not considered seriously.

Film study of the chest gives a record of the pathology present. It indicates its location, its extent and quantity. Periodic examinations then are of great value as they record the change in the lung, whether they be of repair or increase of the disease and assist the diagnosis and prognosis.

Stereoscopic film study of the lungs, plus the findings of the fluoroscope, gives information that checks up well with the findings of the internist.

The amount and extent of lung pathology, when seen on the X-ray films in a supposedly early case of tuberculosis, is much more than would be expected. The amount of pathology seen on the films is always greater than the physical signs would lead one to expect. An acute case of tuberculosis is quite often found to be one arising about an old tuberculous process. Often an old, inactive cavity is present, or old scars of a previous tuberculous infection about which the acute disease has started.

The type of pathology or evidence seen on the X-ray film is most often acute mottling, or small areas of acute consolidation surrounding old lesions. It is quite common to find an old cavity that had not been noted by physical methods of examination. This is often centrally located or

\*Read before the Ware County Medical Society at Waycross, Ga., Oct. 31, 1928.

surrounded by dense scar tissue so that it gives no physical signs. The so-called acute miliary type of tuberculosis of the lungs gives an appearance of fine flakes of snow about the usual lung markings, but is of infrequent occurrence. This type shows a marked decrease in the extent of pathology with rest and appropriate care. Often almost an entire lung will return to a normal appearance in a few weeks. The process will gradually localize at some point, most often in the upper lobe.

We cannot absolutely state whether the lesions present represent an acute process, or chronic, but we can go a long way towards doing so.

I wish to stress the importance of the regular, periodic study of chest cases. It charts and records the changes that have occurred.

The acute cases, when they improve, will show a marked reduction in the amount and extent of lung pathology in a few weeks. In other types, the changes will not be so rapid but will be definite. We then have a valuable check on the changes in the physical signs and the clinical evidence of improvement. Also, if the disease is progressing unfavorably it will indicate such a change.

The question is often asked—"will the X-ray always show tuberculosis of the lung?" In answering, I would say that in a carefully conducted X-ray examination of the chest the chance of failure is very minute.

We have to consider many other types of chest pathology as follows: Lung abscess, certain types of malignancy of the lungs, syphilis of the lung, dust inhalation of different types with their chronic changes, blastomycosis, streptothrix infections, pleural lesions, rib pathology.

Finally, the diagnosis is, of course, the sum of all evidence, including the physical examination, the history, the sputum study, X-ray examination and any other information that can be secured. We must not depend upon the X-ray alone but combine it with other careful work.

#### PELLAGRA WITH PSYCHOSES\*

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Chattahoochee.

In 1335, almost 200 years ago, Gaspar Casal of Spain made observations on pellagra and in 1762 published the first scientific description of

the disease. In this description the disease is called "mal de la rosa" from the characteristic erythema, and is referred to as "a peculiar kind of disease consisting of a combination of scurvy and leprosy." A similar condition was observed in Italy in 1755 and described under the name of Alpine Scurvy in 1776. In 1771, F. Frapalli, of Milan, published a description of a similar condition to which he gave the name pellagra. Mal de la rosa, Alpine scurvy, and pellagra were later shown to be identical conditions.

How long pellagra had existed in this country before it was generally recognized as such is not known; however, the recognition of pellagra in the United States is comparatively recent. Sporadic cases were reported from New York and Massachusetts as early as 1861, but the disease was not generally recognized until 1907-1908, following a report by Searcy of Alabama of an outbreak in an asylum for negroes in that state. Following this publication the disease began to be reported from practically every section of the South and from several Northern localities. The experiences of many of the older practitioners, and clinical records of institutions for the insane, and the histories of many of the earlier recognized cases would indicate very strongly the disease was present in many localities and institutions for years prior to its general recognition.

*Definition*—Pellagra is a chronic disease endemic in certain sections, and occasionally appearing in epidemic form. It is usually characterized by cutaneous, gastrointestinal and nervous symptoms. Mental sequele may occur. It is now generally regarded as a deficiency disease.

*Etiology*—Pellagra is essentially a disease of the poorer classes, but it sometimes occurs among the well-to-do; it no doubt occurs at times in cases where reduction in weight is carried out by dieting, if the case is not properly supervised.

A great diversity of theories has at one time or another been brought forward by various observers to explain its cause. The literature relating to its etiology mentions as factors practically every disease-producing agency conceivable, but with one exception these various theories have supplanted each other in more or less regular order, and at the present time are wholly lacking in confirmation.

The one belief that has continued to survive is that there is a relation between the disease and the dietary of the patient. The belief is as old

\*Read before the joint meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society and the Northwest District Dental Society, Chattahoochee, October 11, 1928.

as the knowledge of the disease itself, for Casal recognized the efficacy of nutritious food in the treatment of "mal de la rosa," and Roussel, a French investigator, summed up the information on this point as follows: "Without dietetic measures all remedies fail" . . . "When drugs and good food are simultaneously employed it is to the latter that belongs the curative action; the former exercises simply an adjuvant action and is without proved efficacy, except against secondary changes or accidental complications."

Since the fruitful and convincing investigation of Goldberger and his associates pellagra can safely be regarded as a disease due to faulty or unbalanced diet (of a specific type), probably to be classed in the group of deficiency diseases, typified by scurvy and beri-beri; though the specific pellagra-producing dietary fault or faults have not yet been determined.

For a number of years it has been thought by many that the number of cases of pellagra were decreasing in the Southern states, but today when State Boards of Health become so alarmed as to request the co-operation of the County Medical Societies, the public press, and Medical Journals in an attack on pellagra, which has recently rapidly increased, we find that such is not the case.

That the disease is on the increase in Florida is indicated by the increasing number of cases committed to the Florida State Hospital during the past few years; these are usually cases with psychoses. The proportion of all cases of pellagra showing such mental involvement has been variously estimated at from 2 to 10%. (Nelson Loose Leaf Medicine).

In 1926 the total number committed was 13, six of which were white females, six colored females and one white male. In 1927 the total number was 34, an increase of 21, over 1926; 20 were white females, three white males, 10 colored females, and one colored male. January to October, 1928, 53 were committed, an increase of 19 over 1927 for the nine months. Of this number there were 15 white females, 18 white males, 16 colored females and 4 colored males. Of the total number of cases 73 were females and 27 males; 38 negroes and 62 whites. Total, 100. The ages range from 25 to 77 years, the majority being more than 45 years of age.

*Counties*—Of the 65 counties of Florida patients were committed from 33; these counties being fairly evenly distributed throughout the

State, showing that the disease is not necessarily more prevalent in any particular part of the State. The commitments range from 1 to 12 to each county, the largest number coming from Duval, Orange, Dade, Leon, DeSoto, Gadsden and Hillsborough Counties.

It is well known that a case of pellagra is usually well advanced before mental symptoms appear, although nervous symptoms appear early. Occasionally a case is seen in which mental symptoms appear early in the disease and rarely a patient may be mentally deranged months before the appearance of the pellagra signs. A distinction should be drawn here between pellagra with psychoses and psychoses with pellagra. Psychotic patients frequently develop pellagra because they will not take food in sufficient quantity if at all, and require constant supervision in this regard.

The psychoses of pellagra may simulate any type of mental disease; there is only one feature which can be regarded as distinctive and that is the depressive character. The condition may vary from mild melancholia to mania. In many cases the victim is violently delirious and has to be forcibly restrained; in others the condition is one of profound stupor. There are frequently delusions of persecution, confusion and disorientation in all planes, with impairment of insight and judgment. Hallucinosis may be present.

A pellagra patient with a psychosis usually presents a typical picture and frequently in addition to the three D's often mentioned in textbooks and signifying dermatitis, diarrhea, and dementia, the fourth D, representing death, is not far removed. The picture is often one of extreme weakness, emaciation and dehydration, well advanced skin lesions; stomatitis, with either diarrhea or constipation; mentally confused and not coöperative. Again in less advanced cases the patient is able to give a fairly good history of the onset and development of the disease and frequently gives as the first mental symptom "forgetfulness." The history is the same as in any case of pellagra, digestive symptoms arising first and in the order of their usual occurrence are, a mild indigestion, anorexia, altered taste, a sensation of burning or scalding of the mouth and tongue. As the condition progresses there may be pain and discomfort in the stomach and abdomen, which may become so severe as to suggest an acute abdominal condition. A loss in weight, though often



slight, may become apparent. In the early stages constipation or constipation alternating with diarrhea, is of frequent occurrence, though in many instances there is no history of involvement of the bowels until the condition has become well established. Occasionally the patient states that every spring there has recurred at exactly the same time of the year a period of diarrhea which may or may not have been attended with a sore mouth or tongue and without any sign of skin lesion, pellagra sine pellagra. We have found the persistent and troublesome diarrhea a comparatively late manifestation and frequently occurs as a terminal symptom.

The mouth symptoms of pellagra may precede, accompany or follow the skin manifestations. The tongue is usually intensely red, especially at the tip and along the edges; the mouth often becomes very foul and ulceration may occur especially about the gums and frenum of the tongue. These ulcers are extremely painful and this added to the extension of the inflammation to the oesophagus and throughout the mouth cavity, makes swallowing an agony. There is usually an extreme degree of salivation.

The nervous symptoms appear early. Several weeks or months before the appearance of other symptoms there is a complaint of progressive weakness and loss of energy—"rundown condition"—coming or growing worse during the late winter or spring months. Insomnia, vertigo, tingling, numbness, formication and burning of various skin areas, most commonly the soles of the feet, the hands and forearms, at times so severe that the parts are wrapped in cold cloths or immersed in cold water by patient. There are often symptoms of neurasthenic character, such as weight or pressure in the stomach, a lump in the throat, change in disposition, and general uneasiness. The prickling, burning sensation is a persistent symptom and often psychotic patients insist they are being persecuted by being stuck with needles in their hands and feet; others believe they are being shocked by electricity.

The cutaneous involvement presents the most distinctive single sign of pellagra in a bilateral, symmetrical erythema of the skin of certain parts of the body. The erythema is followed by a more or less pigmentation and thickening of the skin, with a sharply defined line of demarcation. In the majority of cases the erythema begins to fade in a week or ten days from the date of appearance; the skin becomes dry and rough

and begins to desquamate in small scales, finally leaving a smooth white or pinkish surface. Just within the line of demarcation between the normal and affected skin there persists, long after healing is complete, a deeply pigmented line described by Merk and known as Merk's hyperkeratotic border. This line is of great diagnostic value because of its persistence long after the disappearance of any other skin abnormality. The above is commonly known as the dry type of eruption.

In a smaller number of cases, bullæ or blebs of varying size make their appearance in the erythematous areas. This is frequently referred to as the wet form of the eruption. These lesions often become secondarily infected with pus organisms.

The eruption may occur on any portion of the body surface, though it is most frequently seen on the backs of the hands and the forearms, dorsal surfaces of the feet, and the lower portion of the legs, the face, neck and upper sternal region. Though bilaterally symmetrical, it frequently appears on one side of the body several days or weeks in advance of its appearance on the opposite side. The greater number of lesions are confined to the uncovered surfaces and the eruption often appears rapidly after exposure to the sun's rays and is frequently diagnosed as sunburn. However, in bedridden hospital cases the lesions may appear on any part of the skin surface though the parts are always covered.

In some cases another skin symptom is found on running the tips of the fingers over the sides and point of the nose—there is a fine, rough, potato-grater feel. J. E. Paullin states that this symptom is very characteristic and may occur when no skin lesions are present. We have found this condition in a number of cases at the Florida State Hospital.

There is usually no fever in pellagra except in the wet type where a moderate rise may occur, and, in cachetic and mental cases, when a considerable rise in temperature *often* occurs. The pulse rise is usually in keeping with the fever. The blood picture varies from that of a slight to a marked degree of anemia. Gastric analysis shows a decrease in the acidity of the gastric contents and in advanced cases a total absence of free HCL. The urinary findings show nothing of importance.

*Diagnosis*—A well-developed case with the classical eruption should be readily diagnosed.

The diagnosis in the indefinite pre-eruptive stages is often difficult, but it is here that the diagnosis is most important. When complaints of a "weak and run down" condition, blind staggers, heartburn, peculiar taste, burning in the mouth, and frequent discomfort in the stomach are complained of, it should excite suspicion, especially if these complaints tend to occur or become worse in the spring of the year. When to these complaints are added general nervousness, burning and pain in the feet and stomach and soreness of the mouth and tongue, at least a tentative diagnosis of pellagra should be considered and treatment instituted.

*Prognosis*—The prognosis depends on how far the disease is advanced, the age, and the ability of the patient to take the required amount of food rich in vitamins. Many cases with psychosis are senile and bedridden and often a terminal pneumonia takes them out. Others are feeble-minded, syphilitics or chronic alcoholics, in which cases the prognosis should be guarded.

The length of time elapsing before the mental condition begins to improve also varies, and it has been noted that alcoholics improve slowly. In an uncomplicated case when the patient is able to take food properly the mental condition may be clear in from one to six months, the average being about two months. Mental symptoms may remain for weeks or months after all other symptoms have disappeared; neuritis may also exist for a long time. Many of the patients of this series were infected with hookworm.

#### TREATMENT.

1. A well-balanced diet administered in sufficient quantities in the proper manner, depending on the condition of the patient.
2. Abundance of fluids by mouth and if necessary by rectum or subcutaneously.
3. Sedation and stimulation if necessary.
4. A mild cleansing mouth wash frequently.
5. Usual measures for diarrhea; it improves and disappears with proper diet. Dilute HCL if gastric contents show a deficiency. Castor oil is also sometimes a valuable aid in diarrhea.

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#### BELFIELD'S OPERATION\*

JOHN E. HALL, M.D.,  
West Palm Beach.

There is no doubt that before Dr. William T. Belfield, of Chicago, devised his method of attacking diseased seminal vesicles by vaso-puncture, and direct injection of medicinal solutions through them into the seminal vesicles, that many cases of chronic seminal vesiculitis were incurable, which today would be amenable to treatment.

It is not contended that this method of treatment is indicated in all cases of seminal vesiculitis, nor that it is infallible. However, no hesitancy is felt in stating that the writer regards it as preeminently the best method of dealing with those cases which do not respond to the usual forms of treatment advocated for this condition.

When it is considered that seminal vesiculitis is one of the most common complications of gonorrhea and that practically all men have had this disease, with a resultant involvement of the vesicles in fully seventy-five per cent of all cases becoming chronic, it is then realized how prevalent this condition must be.

The tendency of vesicular infection is toward chronicity, for the reason that the natural drainage of the vesicles through the ejaculatory ducts is very poor, causing a retention of purulent material. Belfield states that the ejaculatory ducts have the function of sphincters and never relax until the vesicles become fully distended.

Assuming this to be true, one can understand why, on account of faulty drainage and retention of pus within the vesicles, together with the fact that the ejaculatory ducts are normally closed, preventing medication introduced into the urethra from reaching the seat of infection within the vesicles, that involvement of these sacs must of necessity be a prolonged affair.

Since the vesicles are rarely, if ever, infected without concomitant involvement of the prostate gland and urethra, it follows that these must receive treatment along with the vesicles, if one hopes to obtain results from vas injection. No attempt will be made to state what this treatment should be, as this is a matter of opinion varying with each physician administering it.

Vas injection is indicated in that class of patients who show little or no improvement, fol-

\*Read before the Florida East Coast Medical Association, West Palm Beach, Nov. 10, 1927.

lowing massage extending over a reasonable length of time. In acute epididymitis, where an epididymotomy is done, it is thought that vas injection should be administered at the time of the open operation, since they are always infected before the epididymes become involved.

I have employed various salts of silver in solution, in the injection of the seminal vesicles, but my preference is argyrol. When I first began to treat the vesicles by this method, the strength of the solution used was fifteen per cent. The strength was gradually increased to forty per cent, without any evidences of chemical inflammation following its use.

While unable to state that better results were obtained from the use of the stronger solutions, it may be said that there is no danger of chemical inflammation of the vasa and epididymes, due to regurgitation of the injected solution if, after injection, the syringe is detached from the needle still remaining in the lumen of the vas and ten to fifteen minims of distilled water injected behind the medication. This entirely clears the vas and prevents regurgitation of the silver salt. This, of course, dilutes the medication within the vesicle, but provision may be made for this by increasing the strength of the solution. Since instituting this procedure, no case of chemical funiculitis or epididymitis has developed, whereas before they were of frequent occurrence.

#### TECHNIQUE

Personally, it has always been found necessary to make an incision through the skin of the scrotum, isolate and bring the vas through the opening, fix and entirely denude it of all its coverings, in order to enter its lumen.

A certain urologist of Chicago injects by a method he styles "percutaneous puncture of the vas deferens." He says: "To insert a needle into the lumen of the vas deferens without making a cut through the scrotal skin, demands an exact technique." No hesitancy is felt in stating that this is true, and no embarrassment is entertained when stating that this "exact technique" has not been reached by me. I am satisfied to enter the lumen of the vas and inject without infiltration, when perfectly exposed and stripped of all its coverings.

No hydrocele has resulted from this form of treatment, nor is it believed that it causes occlusion of the vas, if properly performed. Every patient who showed spermatozoa in the secretions

prior to operation, showed them following vas injection.

In this connection, it may be stated that the secretions of some of these patients did not show spermatozoa, either motile or nonmotile, prior to operation, who did show them after recovery. The secretions of many patients who have a long-standing vesiculitis, fail to show the presence of spermatozoa, whose vasa are patent. In such patients, occlusion can not be advanced as a cause for the absence of spermatozoa.

This question is often asked: "If a single injection of the vasa be sufficient to eradicate infection in the seminal vesicles, why does not a similar injection destroy infection in the urethra? This is a logical question, but if one recalls the histological difference between the mucous membrane of the vesicles and that of the urethra, one can appreciate the difference between infection of the vesicle, which has no mucous glands, and that of the urethra, which has many, wherein the infecting micro-organisms may remain hidden. In addition, one should recall that the seminal vesicle is a single canal having numerous diverticulae, and when the canal and its diverticulae are completely filled with medication, it is retained within the canal for weeks. On the other hand, when the urethra is injected, medication does not penetrate the ducts of the numerous glands, thereby coming in contact with the micro-organisms, and is rapidly drained from the urethra.

That it does remain for weeks within the vesicles, is proved by the fact that not infrequently patients state they have erotic dreams and emissions as long as a month or more after injection, and their night clothes are stained black by the argyrol, mixed with the seminal emission.

In April of 1922, I reported a series of 101 patients treated by this method, in a paper read before the Tennessee State Medical Association, at Memphis, Tennessee. Since that time, I have used this method in the treatment of a much larger number than I originally reported, but the results in these subsequent patients will conform to those obtained in this former series, so I shall give a synopsis of the results of treatment in this series of 101 patients reported.

Only eight patients in this series received more than one injection. Seven of these received two each, and the remaining one received three. Two of the seven given the second, as well as the pa-



tient receiving the third, are placed in the class listed below as "unimproved." Another of the unimproved had a bilateral occlusion of the vasa, but claimed never to have had epididymitis. The vasa were exposed as high as the external rings and several punctures made along their course, but I was unable to inject them.

The results are as follows:

Sixty-seven became culturally and microscopically free of infection, and clinically cured.

Eighteen showed improvement, but still harbored the infection.

Nine were unimproved.

Seven passed from under observation before sufficient time had elapsed in which to determine the end results.

Not all of these patients were venereals, as nine denied all history of gonorrhea, three of which will be reported in detail. The secondary arthritis is the point of interest in the first case.

*Case No. 38*.—A. H., age 26, came to me in August, 1919. Denied all history of gonorrhea, but stated that during December, 1917, while stationed at Camp Gordon, Georgia, he developed a nonspecific urethritis. Was examined daily by army physicians, but no gonococci were found. This urethritis was mild in character and only persisted for about twelve days. A month later, or during January, 1918, he developed an arthritis of right knee joint, which necessitated his being put to bed in a hospital. He stated that the knee was greatly swollen and the pain was intense. Kept in the hospital until August, 1918, at which time he was given his disability discharge, in line of duty. He had a recurrence of the urethral discharge twice while in the hospital, but a few irrigations controlled it on both occasions.

On physical examination, the right knee was found to be swollen, with a bursa immediately below the patella. He was unable to bear his weight on this leg and was forced to walk with the aid of a cane. X-ray examination did not show any structural changes. Patient would not permit much manipulation of the joint on account of the pain. Urine contained pus shreds, which on being centrifuged, fixed and stained, showed many pus cells, but no gonococci.

Palpation of the prostate and vesicles, by rectum, showed both vesicles were enlarged and indurated, with no appreciable enlargement of the prostate. Stained secretions from the vesicles and prostate showed numerous pus cells, but no

micro-organisms. Upon culture for twenty-four hours, approximately fifty colonies of *B. Coli* were demonstrated. Autogenous vaccines were given him, along with daily irrigations, and bi-weekly massage. This line of treatment was continued until November, 1919, at which time, as there was no material improvement in his condition, the vesicles were injected with a twenty per cent solution of freshly prepared argyrol.

He was kept in bed for a week following operation, and then told to report at office daily for urethral irrigations. Four weeks after injection, bi-weekly massage of the prostate and vesicles was resumed.

At this time there was a decided improvement in his knee involvement and he was able to walk without the use of a cane. Ninety days after injection, microscopic findings as well as cultures were negative. The end result was complete cure.

The second case was a hematogenous infection of the vesicles, secondary to kidney involvement. The interesting feature in this case was impotence as a result of vesiculitis.

*Case No. 54*.—R. G., age 24. Referred to me in September, 1920, for treatment of pyelonephritis. His history was that while serving overseas as a soldier with the 82nd Division, in 1919, developed kidney trouble as a result of exposure and was confined to the hospital for six weeks. Had been cystoscoped and kidneys lavaged on various occasions.

At cystoscopy, separate urines were obtained by ureteral catheterization for culture. These showed colonies of staphylococcus albus, which disappeared after the ninth lavage.

After the kidney urines cleared up, the voided urine contained many pus cells and shreds. He denied all history of venereal infection, but stated that for almost a year before coming to me, had been unable to raise an erection, and had been subjected to much embarrassment and humiliation on three different occasions, when attempting it and failing.

Prostate and vesicles were found on palpation to be enlarged and very tender. The massaged secretions showed many pus cells, with an entire absence of organisms. Cultures demonstrated approximately 150 colonies of staphylococcus albus; urethroscopic examination revealed a chronically inflamed verumontanum, about twice its natural size. This was treated with topical applications of nitrate of silver through the ure-

throscope, and the vesicles and prostate massaged twice weekly. He was treated in this manner until January, 1921, at which time the verumontanum appeared normal, but there was not much improvement in the condition of the vesicles, so vas injection was resorted to. Microscopic findings sixty days later demonstrated the presence of an occasional pus cell, whereas, on culture, eight or ten colonies of staph. albus were grown. He was given the second injection, and after forty days the massaged secretions failed to show the presence of pus, and cultures were negative. He was ordered not to attempt sexual intercourse for six months, and suggestion was used to the extent of assuring him that he would be in as good physical condition as he was prior to his army experience. Encouragement, together with vesicle injection, has fully restored him, according to his own version.

The third case comes under the classification enumerated by Thomas and Pancoast (*Annals of Surgery*, Vol. XL), who state: "The seminal vesicles, too often disregarded and neglected, if not forgotten, have not received the consideration which is their due as a foci of infection, and in the near future will be their demand, especially at the hands of neurologists, orthopædists and internists. We refer to a vast array of conditions with a symptom-complex too little understood, as acute and chronic synovitis, and arthritis of an infectious and toxic nature, so-called articular or even muscular rheumatism, rheumatoid arthritis, arthritis deformans, gout, hypertrophic arthritis, chronic bladder disturbances, recurrent epididymitis, impotency, renal and cardiac complications, digestive disturbances and an ensemble of mental and nervous manifestations almost incredible of belief.

*Case No. 73.*—R. L., age 52. This patient had been treated for conditions ranging from sciatica to hip-joint disease. For the past two years had been practically an invalid, being unable to arise from a chair without assistance, and requiring the aid of two canes when attempting to walk. He denied all history of venereal disease. Had a generalized rheumatic condition for the past five years, pain especially severe in lumbar regions and radiating down the legs on locomotion. Physical examination revealed a large boggy prostate and indurated vesicles, which were massaged with great pain to the patient. The secretions, upon microscopic examination, showed many pus and red blood cells.

Many extra-cellular gram positive bacilli were found on stained smears. Upon culture, the organisms were isolated and found to be diphtheroid bacillus and staphylococcus pyogenes aureus. Bi-weekly massage along with daily irrigations of potassium permanganate were given over a period of two months, with no apparent improvement in the patient's condition, from the microscopic standpoint. A vas injection was then resorted to, with the result that within twenty days a decided improvement in the patient's condition was noted. Microscopic examination showed a fair amount of pus, but a disappearance of organisms on direct smear. Cultures, however, showed after twenty-four hours' incubation, a few colonies of the same organisms. The second injection of the vas was made forty-five days after the first, followed by rapid improvement. The general physical condition was benefited, with rapid subsidence of all rheumatic pains and he began to walk without the assistance of canes. Ninety days following the second injection the patient returned home. Stained smears at this time did not reveal pus and cultures were negative to all organisms.

#### SUMMARY.

1. Vas injection is indicated in acute seminal vesiculitis, accompanied by urinary symptoms, chief among which is, retention, massage being contraindicated on account of the acute fulminating process.
2. In all cases of acute epididymitis where epididymotomy is indicated, vaso-puncture and injection is also indicated.
3. All chronic cases of seminal vesiculitis not responding to treatment, such as massage and other forms of treatment recommended for this condition, should be injected.
4. Patients manifesting symptoms of joint involvement with infection of the seminal vesicles improve under this form of treatment.

#### ORAL FOCI OF INFECTION\*

JOS. B. GAME, JR., D.D.S.,  
Tallahassee.

The importance of locating foci of infection in the human body and of eradicating them has only been recognized generally in the past few years. Even after the fact was known that toxins could cause and aggravate many ills no

\*Read before the joint meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society and the Northwest District Dental Society, Chattahoochee, Oct. 11, 1928.

attention was given to the oral cavity in that connection.

There was a time a few years ago when abscessed teeth, decayed teeth, pyorrhea, ill fitting fixed or removable bridge work, were given little thought except when they produced pain. And in spite of all the research and clinical work that has been done, and all of the articles which have been written, and of all the lectures which have been given, I am afraid that about all the average dentist or physician looks for are the abscessed teeth and teeth which have already been ruined by pyorrhea.

I am no "one hundred per center," I have a few nonvital teeth myself, radiographically they seem to be in good condition now, and you can just bet that I am going to hang on to them just as long as I am in good shape physically. However, if I ever do go down with neuritis or arthritis or for any other cause which might be produced or aggravated by a possible production of pus, even if I can't find a granuloma on each one as big as a pecan they are coming out. It has been demonstrated time and again that a radiograph can not plainly show a rarified area which is on the side of a root, and if I were ill I should take no chances.

We can stand up under quite a strain as long as we are well, but it doesn't take so much to keep us down when we are once down.

I saw a patient the other day who has just passed a fine examination for a \$25,000.00 life insurance policy—he said he felt like a top and had not been ill for ten years. Upon raying his mouth I found nine teeth apparently carrying so-called "chronic abscesses"; four of them were clearly established fistulae.

Of course, we can be fairly certain that if that man became ill the fact that the oral cavity was in such bad condition probably would have been against his normal recovery.

Just as this one man seems to remain healthy in spite of anything, there are others who can stand very little. We do not expect every piece of machinery to carry the same load, nor do we expect every beam or pillar to support the same strain.

As people differ in the amount of mental strain they can live under, just so do they differ in the amount of physical strain they can live under—I do not mean in direct proportion, of course.

The fact that it seems impossible to kill one patient with anything less than an axe or dynamite

cannot be offered as a reason an ill-fitting bridge or a couple of shell crowns cannot put another patient down and out.

Dr. John Callahan, the originator of the chloco-percha-resin method of canal filling, used to refer to shell crowns as "mother hubbards," and described the fit of the average crown as comparing to the way a milk bucket fits a post when it is turned over to dry.

I wonder how many dentists have held their noses when they removed a shell crown which had been in place a few months or a few years? I assure you that I have never come across one which reminded me of a rose arbor, and I am certain that this cannot be called a healthy mouth condition.

I think that all too often we receive a patient who has been referred by a physician with a request for a complete oral examination, and either tell the patient that we already know all about the condition existing in his, or her, mouth and go no further, or do examine the mouth and finally say "there is only one doubtful tooth and I don't think that just one tooth would cause all this trouble." We cannot know that only one tooth is not causing the trouble until we remove it as a possible source of trouble and see the final results.

Then again, in the examination we find decayed teeth, overhanging margins on fillings, ill-fitting fixed and removable bridges which are veritable sewer traps and say nothing. Part of this fault is with the physician, for if he would leave all diagnosis of dental ills to the dentist, and offer no opinions to the patient or the dentist there could be no opportunity for the dentist having to disagree with an opinion which has been expressed to the patient by the physician.

I might suggest that the physicians and the dentists come to an agreement—let no dentist attempt to treat pneumonia and no physician attempt to treat pyorrhea.

I know that I shall get myself criticised now by both physicians and dentists. Fully fifty per cent (and I feel like raising the figure) of the dental radiographs made are not capable of aiding in a diagnosis, and a radiograph at best can only be an aid.

I have seen radiographs, and now have many in my files that I do not believe you could ever guess by looking at them just what part of the mouth they are supposed to show.

I had thought for a while of using a lantern



and some slides. I am sure you could get a good many laughs out of the slides; possibly some day I can inflict them on the dentists of this group and not bother the physicians.

A short time ago I received a set of ten radiographs purporting to be a full radiographic examination of a mouth of thirty teeth. There should have been at least fifteen exposures—from fifteen to thirty are necessary according to Raper and Simpson—however, the written diagnosis which accompanied these spoiled films was astounding. So many dreadful things were found that I wondered if the poor patient might not even die before I could get her out of the office. After looking her over I decided that she was even strong enough for me to make a check set of films for comparison.

In the accompanying diagnosis the two lower second bicuspid had "blind abscesses" on them, examination showed two normal live teeth that happened to be so placed in the arch that the mental foramina were superimposed on their apices on the films. The upper bicuspid and molars were supposed to be involved in one large abscess or cyst; examination of the mouth and the check films showed the shadows of the molar and floor of the maxillary arch were responsible for the illusion.

Now this poor patient had already had the bad news broken to her, and she had read the horrible sentence also; so what was I to do?

I knew that if I told her what I thought was necessary, just one filling and a thorough prophylaxis, I would be called a liar by her physician who was much better known to her than I was. So I decided to temper the wind a bit and after a lot of hot air got her right groggy. I filled the cavity, cleaned up her mouth a bit and took out an upper third molar that was out of line and doing no good. You see she just had to lose a tooth or two to feel good. I wound up by giving her a certain mouth wash that has a taste which should make her forget all her other troubles.

Now, if that physician says that I can't cure abscessed teeth with a mouth wash we will be even, for I say that he could not find one with his X-ray, and if he cannot find them he can't know whether I cured them or not.

One more crack at the physicians and then the dentists get it. The manager of a supply house in Atlanta, and who happens to be an old friend of mine, knew that I was going to make a trip

through the country and pass through a certain town, so he sent me a letter he had just received and asked me to stop by and see if I could help the doctor out a bit. This physician wrote in and asked for larger dental films than the No. 1 regular, as he found them too short to get a full length tooth on. But I'll risk a dime that he was charging for an examination and making a diagnosis from the films.

Right here I must save my own hide. Tallahassee is too small, my family is too large, and I've too many friends to talk about the Tallahassee physicians. You may be certain that no Tallahassee physician ever wrote that diagnosis or letter. We get along too well over there for anything like that.

Now for the dentists. If you look only for teeth that are abscessed, carrying granulomata which are radiographically evident, when you are trying to put a mouth in healthy condition, either while assisting a physician to clear up trouble or while doing what you should do with every patient who comes to you for a complete examination, you are failing in your duty to your patient. Granulomata are a common source of trouble, but I do not believe they are the most common.

I believe the bridge work of the type that was in style during the Spanish-American war and which is used to quite an extent today, is as much to blame as anything else. Also I believe that the reason so many patients who have gone trustingly to their dentist, allowed him to do as he would, and then been disappointed because they did not get the results they hoped for, is that the dentist limited his work to removal of the abscessed teeth, and then shined up the rest of the teeth a bit, patted the patient on the back and wished him well.

I know that when you suggest cutting out ragged overhanging fillings you are frequently told that they are not bothering just now and the patient wants to leave that work for some indefinite later time.

If you suggest the removal of the 1776 bridge work which is a trap for decomposing food particles, the patient then thinks you are broke or need a new car or want a trip to Cuba, and so puts you in a general class with the gold-diggers and medical specialists.

I am aware that I have been cussed and pointed out as one who wanted to get all that could be gotten out of the old pocketbook, but

when a patient comes to me referred by a physician and I understand that the physician wants to eliminate all unhealthy mouth conditions I do not hesitate to tell him just what it will require. If he says that he doesn't want all of that work done I try to explain just how he is hurting himself and hindering the physician, usually winding up by saying that "if you will not have all the needed work done, I will do all that you think you want done and then write a complete statement of the facts to your physician, then if you don't get along so well later on you cannot blame either of us."

That usually takes all the wind out of their sails, and even if I do get roundly cussed frequently, when the patient does leave the office he is not in ignorance of the true conditions to be found in his mouth as I see them. That is something anyway.

I believe that there is really only one difference between a good dentist and a poor dentist, attention to detail in your diagnostic work, preparatory work and restorative work.

All of us know a clean mouth when we see it, but I am afraid that some of us are not differentiating between a pathologically clean and unclean mouth and so in this way are failing in our duty to our patients when they look to us for aid.

In quite a few cases that you may see the patient is not financially able to have all the indicated work done, but all cavities can be filled with cement, all broken down or diseased teeth extracted and all food traps removed. The patient then will be left in a far better condition than he was in, for if chewing surface is broken up by your work at least the body does not have to fight the toxins found in a dirty mouth.

If I have rambled around quite a bit and hit the subject from corners you will forgive me, for thick books have been written on the same subject. I have made no effort to bring into this paper the scientific data which has been assembled through thousands of clinical tests and reports.

Of course, I am not speaking about you and your patients; it is the other fellow and his patients who are in trouble.

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*April 2nd and 3rd, 1929*

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Calhoun, Jackson, Gulf.  
FIFTEENTH DISTRICT—W. E. VAN LANDINGHAM, M.D.  
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Sumter, Lake.  
SEVENTEENTH DISTRICT—L. C. INGRAM, M.D. . . . . Orlando  
Osceola, Orange.  
EIGHTEENTH DISTRICT—DAVID R. KENNERY, M.D. . . . . Sarasota  
Manatee, Sarasota.  
NINETEENTH DISTRICT—C. H. KIRKPATRICK, M.D. . . . . Arcadia  
DeSoto, Hardee, Highlands.  
TWENTIETH DISTRICT—WILLIAM R. WARREN, M.D. . . . . Key West  
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St. Lucie, Okeechobee, Indian River, Martin.

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MRS. ROBT. HARRIS, RECORDING SEC'Y-TREAS. . . . . Miami  
MRS. M. J. FLIPSE, CORRESPONDING SEC'Y . . . . . Miami

## OUR GUESTS ARE COMING

November, 1929, will mark seventeen years since the Southern Medical Association met in Florida. This was before most of us could claim ourselves Floridians. At the recent Asheville meeting the Association accepted our invitation to meet in Miami. Representatives from various committees of our State pledged the committee selecting a meeting place a welcome that can never be forgotten. We must keep our promise.

Since Miami happens to be in the southeast corner of these Southern States there might be some uneasiness as to the size of the attendance. The Southern Medical Association, the second largest medical association in the world, is accustomed to a registration of two to three thousand. It should be the pride of every member of the Florida Medical Association to see this usual attendance surpassed. Simple this would be if every member would take an out-of-the-State guest along with him. Miami says she will do her part. In no other southern city are there more adequate hotel accommodations or more



convenient arrangements for the comfort of guests. She has assured the Committee that there will be no restrictions upon facilities for having a good time.

When the Southern Medical Association meets in Miami every Florida doctor who is not registered there will be missing a profitable, enjoyable time, an opportunity to help the State, and a part in the bettering of organized medicine in Florida.

Let's all be there to welcome our guests.

### EFFECTS OF CLIMATE

So much has been said and written in regard to the beneficent results of Florida climate that as medical men, we are apt to overlook certain of the less desirable effects of a subtropical climate. It is well for the physician to recognize the disadvantages and better still to be able to cope with them when certain illnesses and indispositions arise with climate as the important etiological factor.

In the September issue of the "Archives of Internal Medicine," C. A. Mills describes a symptom complex noted in Peking, China, which he considers as a climatic effect due to functional adrenal inadequacy. His observations are noteworthy in that he suggests relatively simple measures for their relief and reports several cases which showed unusual response by the oral administration of adrenalin.

In the September issue of this Journal, a somewhat similar group of cases were analyzed under the caption "Personal Observation on Certain Cases of Asthenia in Southern Florida." It is probable that the difference between the syndrome described by Mills and the similar syndrome found in asthenics in Florida is only a question of degree. The use of adrenalin by mouth is effective especially when the drug is protected from oxidation by glucose, and from digestion by being administered with a considerable quantity of water on an empty stomach.

It is of interest that these symptoms of asthenia arise chiefly during our summer months when the climate is strictly tropical.

### STATE NEWS ITEMS

The Scientific Program Committee is now preparing the program for our next meeting which is to be held in April at St. Augustine. The Committee consists of Drs. G. H. Edwards, Orlando, chairman; J. D. Love, Jacksonville, and A. M. C. Jobson, Tampa. Those desiring a

place on the program should communicate without delay with the chairman of the committee, giving the title of the paper he wishes to present, together with an abstract of the contents. The applicant is also requested to suggest the names of those he desires to discuss the paper. If you wish to read a paper at the next annual meeting, do not delay writing the chairman of the Scientific Program Committee.

\* \* \*

The members of the Florida Medical Association will be delighted to know that Miami has been selected as the next meeting place of the Southern Medical Association, to be held in November, 1929. The Dade County Medical Society, together with the other component societies of the Florida Medical Association, will put forth every effort to make this the most successful meeting the Southern Medical Association has ever held. It is many years since the Southern Medical Association has met in Florida, the last meeting being held in Jacksonville in 1912. In order to secure the meeting for Miami, the Dade County Medical Society sent many of their members to Asheville and they are to be congratulated on their success.

\* \* \*

Dr. Edward Jelks, Jacksonville, was elected president of the Duval County Medical Society for the coming year at the annual meeting held at the Duval County Hospital Tuesday evening, December 4th. Dr. Luther Holloway, Jacksonville, was elected vice-president; Dr. Kenneth Morris, Jacksonville, secretary, and Dr. W. M. Shaw, Jacksonville, treasurer. Dr. S. E. Driskell, Jacksonville, retiring president, was elected to membership on the Board of Governors. The work of the past year was reviewed at the meeting and reports showed that much had been accomplished in a constructive way. The magazine Hygeia was placed in fifty schools in Duval County and the County Society contributed \$200 for the relief of the storm sufferers in southern Florida. Realizing the need for better health measures, the Society endorsed the new milk bill before the City Council. This bill is essentially the same as the one authorized by the United States Public Health Service. A representative from the Society has been present at each meeting of the City Planning Commission which, it was asserted, is doing much to beautify Jacksonville.

(Continued on page 312)

# Are you taking advantage of Knox Sparkling Gelatine—

## *a valuable dietary adjunct for diabetic patients?*

BECAUSE plain unflavored gelatine blends perfectly with all fruits, vegetables, meat and fish, it is ideally suited to lend variety and palatability to the diabetic diet. Portions too small to serve alone can be made into satisfactory dishes with the addition of Knox Sparkling Gelatine.

With Knox Sparkling Gelatine a number of pleasing variations can be introduced into the diabetic diet—dishes that have high protein or fat value, are appetizing, and impart a sense of satiety to the patient. Made plain and pure—unbleached, without flavoring, coloring, or sugar content, Knox Sparkling Gelatine is an ideal food for the purpose. These qualities, also, make it a desirable means of lessening the monotony of liquid and soft diets in general.

In infant feeding, the protective coloidal ability of Knox Sparkling Gelatine in overcoming imperfect milk digestion has long been known. Exhaustive tests have proved that the addition of 1% of pure, unflavored gelatine to cow's milk tends to prevent regurgitation, gas, colic, diarrhea, and malnutrition. In fact, Downey has demonstrated that the addition of gelatine increases the available nourishment of milk mixture, by about 23%.

Knox Sparkling Gelatine is manufactured by a concern with 40 years of

experience in making this one product. From raw material to finished product, every step in its manufacture is under constant chemical and scientific control. The most sanitary conditions prevail throughout the factory.

### *Valuable booklets on dietetics available*

The booklets included below have been prepared by recognized dietetic authorities. They contain important data on the use of Knox Sparkling Gelatine in the various diets, together with recipes for a variety of tempting, appetizing dishes. Surgeons, doctors, dieticians, and members of hospital staffs will find them valuable references. Check those you would like to have and mail us the coupon.

### CAUTION!

ALL gelatines are not alike. Many have added acid, flavoring and coloring matter. In the form of ready prepared desserts, they contain as high as 85 per cent carbohydrates.

Knox Sparkling Gelatine is a protein in its purest form, particularly suitable where carbohydrates and acids must be avoided. It contains more than 80 per cent pure protein (4 calories per gram).

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- ☐ The Health Value of Knox Sparkling Gelatine

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City \_\_\_\_\_ State \_\_\_\_\_

Dr. R. F. McLeod, formerly of Greenwood, recently moved his office to Madison.

\* \* \*

At the last monthly meeting of the Woman's Auxiliary of the St. Vincent's Hospital, Jacksonville, it was voted to erect a memorial bulkhead around the hospital property, facing the St. Johns River. The following officers were elected by the Auxiliary: Mrs. Frederick J. Waas, president; Mrs. J. K. McIver, Sr., vice-president, and Mrs. W. McL. Shaw, treasurer.

\* \* \*

The Volusia County Medical Society held its regular monthly meeting at the Magnolia Tea Room, New Smyrna, Tuesday, October 9th, at 6:30 p. m. Dr. J. E. Rawlings of Daytona Beach gave a very interesting talk on European Clinics, most of which he has visited in the past two years while he has been abroad. The Woman's Auxiliary of the Volusia County Medical Society also held their meeting at the same place. Before the meetings, eighteen doctors and their wives, with a few stags, enjoyed a duck dinner.

\* \* \*

Dr. Max Ghertler announces the removal of his offices from 270 N. E. 23d St. to 1115 S. W. 11th St., Miami.

\* \* \*

On December 5, 1928, Judge Lake Jones, Federal Judge of the Northern District of Florida, sentenced J. E. Roberts to serve seven years in the Federal Penitentiary, Atlanta, for using the mails to defraud. Roberts is a negro claiming to be able to cure tuberculosis, cancer and many other diseases by medicine of his own make, which he sent through the mails. His headquarters were at Armstrong, Florida. Roberts plead guilty to seven counts. This case has been of unusual interest due to his nefarious advertisement and special mention should be given to Dr. L. F. Kehler, Washington, D. C., who had charge of the collaboration work for the postal department and the department of Justice; also to Mr. D. F. Angeer, postal inspector from Washington, D. C., who worked up test correspondence, leading to a fraud order which resulted in the indictment. Our local inspector, Mr. T. H. Jerry, who worked so hard for the conviction of Dr. Geo. A. Munch in Tampa last fall, secured the local evidence in the case. Roberts came to Florida about three years ago from North Carolina.

Colonel James L. Young of Plant City, father of Dr. C. T. Young, former president of the State Board of Health, died recently in his home city at the age of 81.

\* \* \*

The regular quarterly meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society was held at Chattahoochee on October 11th. This was a combined meeting of the medical society and the Northwest District Dental Society. The following program was rendered:

"Hysterectomy versus Suspension in Selected Cases"—C. K. Wall, M.D., Thomasville, Ga.

"The Role and Rationale of Oral Focal Infection"—C. J. Caraballo, D.D.S., Tampa.

"Pellagra with Psychoses"—J. H. Pound, M.D., Chattahoochee.

"Focal Infection from a Dentist's Viewpoint"—B. V. Danheiser, D.D.S., Pensacola.

"Tuberculosis of the Kidney"—F. E. Davis, M.D., Chattahoochee.

"Oral Foci of Infection"—J. B. Game, D.D.S., Tallahassee.

\* \* \*

Dr. Eugene B. Elder resigned as superintendent of the Morrell Memorial Hospital of Lakeland to accept the superintendency of the Knoxville General Hospital, Knoxville, Tenn. Dr. Walter A. Weed will succeed Dr. Elder as superintendent of the Morrell Memorial Hospital.

\* \* \*

Dr. L. M. Anderson of Lake City was among those who attended the Interstate Post-Graduate Assembly in Atlanta recently.

\* \* \*

Dr. Foster P. Key of Green Cove Springs had a narrow escape from injury this past month when his automobile collided with a truck.

\* \* \*

Dr. W. A. Claxton, assistant city director of public welfare of Miami, recently resigned his position.

\* \* \*

Born to Dr. and Mrs. J. D. Parker of Stuart, a daughter, on September 21st.

(Continued on page 314)





# The Long Night of the Far North

DURING the long Arctic night man survives stiffening cold because he knows how to protect himself. Not only does he wear thick furs but, in his limited dietary, fats predominate, affording him not only fuel for body heat but the needed Vitamins A and D as well.

In our winter months, with the fog, smoke, short days and minimum of sunshine, we need these same Vitamins A and D to fortify our body requirements during the various periods of stress that arise.

*Cod Liver Oil is especially needed in winter as an accessory food*

Prescribe "Standardized Cod Liver Oil, P. D. & Co."

It contains in each fluid ounce not less than 13,500 Vitamin A units and 3,000 Vitamin D units. It is as nearly tasteless as a pure cod-liver oil can be.

*In 4-ounce and 16-ounce bottles*

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The next annual Clinical Congress of the American College of Surgeons will be held in Chicago, October 14 to 18, 1929.

\* \* \*

Dr. T. H. Bates of Lake City has recently returned from a several weeks' trip with his family visiting relatives in Texas. While away, Dr. Bates attended clinics in Houston and New Orleans.

#### EDMUND W. WEIS

Dr. Edmund W. Weis of DeLand died suddenly November 2nd of angina pectoris. Dr. Weis practiced in Ottawa, Illinois, for 39 years. The last few years he has resided in DeLand, where he had a host of friends. He was a member of a number of medical societies, including the American Medical Association, American College of Surgeons, Florida Medical Association and the Volusia County Medical Society.

Drs. T. W. Langley, A. W. Knox and G. S. Selman of Sanford attended the Interstate Post-Graduate Assembly recently held in Atlanta.

\* \* \*

A daughter was born to Dr. and Mrs. Silas Morgan Copeland of Jacksonville on September 26th. The little girl has been named Merle.

\* \* \*

The State Board of Medical Examiners met at Marianna November 12 and 13, with the following members present: Dr. E. G. Peek, Ocala, president; Dr. J. M. Mann, Lake Butler, vice-president; Dr. W. M. Rowlett, Tampa, secretary, and Drs. Thos. W. Hutson, Miami; N. A. Baltzell, Marianna; J. D. Raborn, St. Petersburg, and T. D. Vassar, Lakeland.

\* \* \*

Dr. G. H. Withers of Miami announces the removal of his offices to the Aladdin Bldg., Miami Beach.

\* \* \*

Dr. Blackburn W. Lowry of Tampa was married to Miss Helen Jean Heffron, October 27, 1928, in "The Little Church Around the Corner," New York City. Mrs. Lowry is a native of Sewickley, Pa., a suburb of Pittsburgh, and has been a frequent visitor in Tampa during the past five years.

(Continued on page 316)

## CONSTIPATION

### *In the Breast-Fed Infant*

**HORLICK'S MALTED MILK** has long been used with success in the prevention and correction of constipation among breast-fed infants

### *For the Nursing Mother—*

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### *For the Breast-fed Baby—*

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Address communications to Brawner's Sanitarium, Smyrna, Ga., or to the city office, 79 Forrest Ave., Atlanta, Ga.

**DR. JAS. N. BRAWNER**, Medical Director.  
**DR. ALBERT F. BRAWNER**, Resident Physician.





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The American Board of Otolaryngology held an examination in New York City October 11th. One hundred and thirty applicants were examined; one hundred and thirteen were passed.

An examination was held in St. Louis, October 15th. Seventy-nine were examined; sixty-eight were passed.

The Board will hold an examination in Portland, Oregon, Monday, July 8th, during the session of the American Medical Association, and in Philadelphia in October preceding the American Academy meeting in Atlantic City.

Those desiring information relative to the above will please communicate with Dr. W. P. Wherry, Sec'y Board of Otolaryngology, 1500 Medical Arts Bldg., Omaha, Nebr.

\* \* \*

The following members of the Florida Medical Association attended the twenty-second annual meeting of the Southern Medical Association, recently held at Asheville, North Carolina:

Adamson, W. P. ....	Tampa
Arms, B. L. ....	Jacksonville
Babcock, D. T. ....	Miami
Beggs, John Miller.....	Chattahoochee
Benton, G. H. ....	Coral Gables
Brinson, W. D. ....	Baldwin
Carlton, Leland F. ....	Tampa
Claxton, W. A. ....	Miami
Coplan, Milton M. ....	Miami
Copp, F. A. ....	Jacksonville
Feaster, O. O. ....	St. Petersburg
Fellows, James H. ....	Pensacola
Forbes, S. B. ....	Tampa
Harris, D. W. ....	Miami
Heinberg, C. J. ....	Pensacola
Jones, Walter C. ....	Miami
Kirby-Smith, J. L. ....	Jacksonville
Knowlton, R. H. ....	St. Petersburg
Limbaugh, Louie ....	Jacksonville
Litterer, A. Buist ....	Miami
Love, J. D. ....	Jacksonville
Marr, N. M. ....	St. Petersburg
Merryday, H. L. ....	Daytona Beach
Miller, R. L. ....	Graceville
Milton, J. D. ....	Miami
Murrow, J. S. ....	Apalachicola
Panettiere, Cayetano ....	Miami Beach
Payne, W. C. ....	Pensacola
Pearson, Homer L. ....	Miami
Peyton, Harry A. ....	Jacksonville
Shaw, E. Clay ....	Miami
Simmons, John A. ....	Miami
Simpson, J. Knox ....	Jacksonville
Smith, D. T. ....	Gainesville
Smith, H. Mason ....	Tampa
Smith, Marvin H. ....	Miami
Snyder, J. W. ....	Miami
Strickland, J. A. ....	St. Petersburg
Taylor, H. M. ....	Jacksonville
Taylor, Joseph W. ....	Tampa
Turberville, J. S. ....	Century
Waas, F. J. ....	Jacksonville
Watters, William H. ....	Coconut Grove
Webb, Carol C. ....	Pensacola
Williams, Carl A. ....	St. Petersburg
Woodard, R. C. ....	Miami

(Continued on page 318)



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Dr. M. A. Lischkoff has returned to Pensacola after spending the past month in Philadelphia, St. Louis, Baltimore and New York. While in St. Louis he participated in the meeting of the American Academy of Ophthalmology and Otolaryngology.

\* \* \*

The next congress of the Pan-American Medical Association will be held in Havana, Cuba, from December 29, 1928, to January 3, 1929. The program which is being arranged by the president, Dr. Fred H. Albee of New York City, will be a strong one, and will include four orations, upon the subjects of surgery, medicine, pediatrics, and tropical medicine.

Dr. William J. Mayo will give the Oration on Surgery, and Dr. Lewellys Barker of Johns Hopkins University the Oration on Medicine. Papers will be read in both Spanish and English.

This congress will be representative of the medical profession of the entire Western Hemisphere. Chapters of the Association have been and are being organized in various centers of North America and Central America, as well as in the Antilles, all of which will be represented at the Congress.

One of the recent accomplishments of the Pan-American Medical Association is the establishment of the Pan-American Hospital in New York City for the benefit of the Latin-speaking people.

A large attendance is solicited.

\* \* \*

The regular monthly meeting of the Duval County Medical Society was held at the Duval County Hospital, Jacksonville, Tuesday evening, November 6th. The scientific program consisted of two interesting papers: "Menorrhagias," by Dr. Thos. Fields, and "Radium Therapy in Uterine Hemorrhage," by Dr. Gerry Holden. Ways and means of improving the attendance at meetings was discussed. As an experiment, it was decided to hold the January meeting at the new Jacksonville Chamber of Commerce.

---

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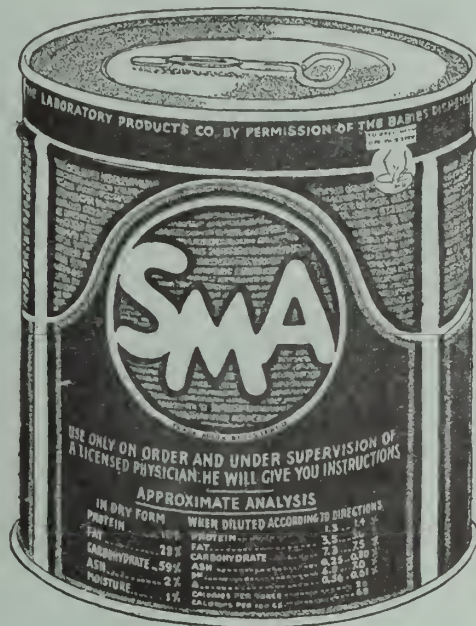
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\*Gold & DeGraff, Jour. A. M. A., March 31, 1928.

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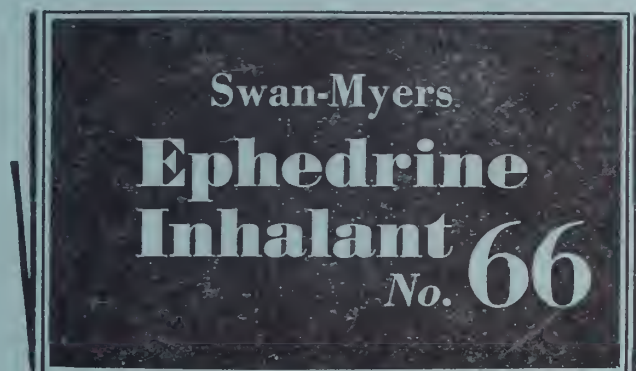
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### CONTENTS

	PAGE		PAGE
"Psychoneuroses" . . . . .	335	Resume of 600 Cases of Syphilis Observed at the Florida State Hospital . . . . .	349
<i>Robert M. Harris, M.D., Miami.</i>		<i>J. C. Inman, Jr., M.D., Chattahoochee.</i>	
The Significance of Hematuria to the General Practitioner . . . . .	339	A Record of the Examination of 255 Pre-school Children of Tampa . . . . .	350
<i>Louis Orr, M.D., Orlando.</i>		<i>W. H. McCaslan, M.D., Tampa.</i>	
Prostatic Hypertrophy . . . . .	342	Editorials: (1) State Dues; (2) Capital Investment in Medicine . . . . .	352, 353
<i>John E. Hall, M. D., Miami.</i>		State News Items . . . . .	353-358
Hemotherapy—A New Method in the Treatment of Vomiting of Pregnancy . . . . .	344	Schedule of Meetings—Component Societies . . . . .	357
<i>James L. Carlisle, M.D., West Palm Beach.</i>		Tuberculosis Abstracts—A Review for Physicians Issued Monthly by the National Tuberculosis Association . . . . .	360-366
Otomycosis . . . . .	347		
<i>N. W. Gable, M.D., St. Petersburg.</i>			

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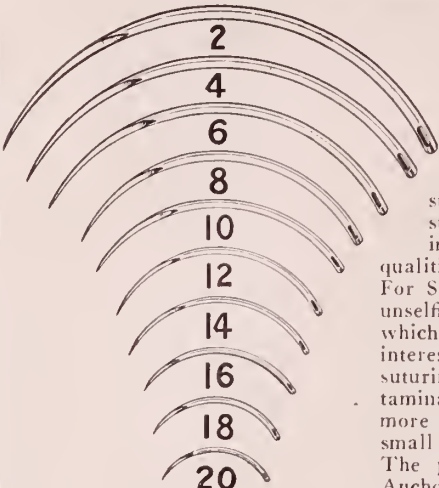
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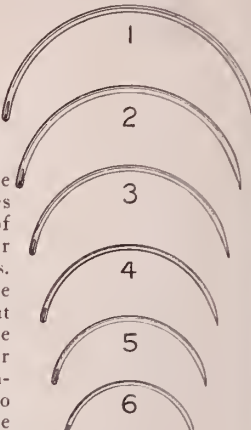
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Dr. Solomon Strouse, Associate Professor of Medicine at Rush Medical College, in his address at the New York Academy of Medicine, as quoted by the *Evening World*, said: "I am beginning seriously to wonder whether scientific efforts at diet control based on animal experiment are not overshooting the mark; whether we are not interpreting the life of a caged white rat rather too seriously for the comfort of a free white man." He went on to say that "food and food habits in general play no important role in the attainment of longevity. . . . Despite much that I read of the evils of the modern way of eating and living, I find in actual practice comparatively few examples of excessive food indulgence to the point of harm. . . . It is possible to conceive of undernutrition causing more trouble than overeating."

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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

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Jacksonville, Florida, January, 1929

Number 7

## "PSYCHONEUROSES"\*

ROBERT M. HARRIS, M.D.,

Miami.

The psychoneuroses show themselves as clinical pictures of varying kind which are often difficult to differentiate, and which sometimes present such a confusion of symptoms that the inquirer begins to wonder how to correctly classify the type characteristics. This difficulty is further complicated by the fact that there is a very close relation between the neuroses and the psychoses.

In no field of medicine has there been so much controversy as in the conception of functional disorders, and even today there is a very prevalent belief upon the part of many of the medical profession that disturbances in function are unthinkable without changes in structure. Indeed, in all probability to the majority of physicians, the designation "functional" is only a convenient cloak for our ignorance as to the underlying structural changes.

Many points could be mentioned in differentiating the neuroses from the psychoses, but in a discussion of this character time will not permit us to dwell on all of them. The chief thought to be borne in mind is that the neuroses represent functional disorders without true alteration in structure, while the psychoses, especially the severer ones, such as dementia paralytica, paresis, etc., are characterized by structural as well as functional changes. In the neuroses the primitive instincts of self-preservation and procreation are retained, while in the psychoses the primitive instincts are usually lost.

The most common types of functional neuroses are neurasthenia and psychasthenia. Other forms which are described as hysteria, anxiety neuroses, hypochondriasis, as well as the traumatic and occupational neuroses, tics, and the like, should be mentioned. However, we shall confine ourselves in this discussion to that condition known as neurasthenia and omit the other forms of functional disorders.

Neurasthenia, sometimes called nervous prostration, nervous exhaustion, etc., comes from the Greek "neuron," meaning a nerve, "a" meaning

privative, and "sthenos" meaning strength, thus we have the derivation which means depriving a nerve of its strength. The term was first used by Beard of New York in 1869 to designate a large group of disorders, the common characteristics of which were manifestations suggestive of exhaustion in the absence of any disease of the organs.

*Etiology.* 1. *Predisposing Causes.*—Statistics are not available, or at least do not accurately set forth the data because of the difference in the classification which various writers show. The figures given are more or less of a composite average of several writers on the subject.

*Sex.*—Females are more commonly affected than males, although one writer, von Hössling, found 604 of 822 consecutive cases were males.

*Age.*—The condition is most common during the years of stress and strain. In a series of cases reported by one writer it was found that 25% occurred between the ages of 20 and 30; 30% from 30 to 40; and 16% from 40 to 60.

*Heredity*—is undoubtedly a predisposing factor. People of a poor hereditary endowment are more likely to develop neurasthenia than those whose nervous systems are made of better material. In a review of 50 cases one writer has been able to detect a history of "nervousness" in the family in 34% of the cases.

No social group is free from neurasthenia, but it seems to be more prevalent among the upper classes, those who earn their livelihood by means of brain power rather than among the laboring classes. This question is open for argument, however, as everyone present is more or less familiar with the functional nervous complaints of our negroes in the South.

2. Of the exciting causes much has been said concerning the effect of overwork. For a long time overwork and neurasthenia were almost synonymous terms. However, as various investigators began to compile their data on this question, it has been found that overwork per se is not the important exciting factor that it was formerly thought to be. It is admitted that if work be too prolonged a state of actual exhaustion will occur resulting in a faulty elimination of such poisonous substances as are poured out in the

\*Read before the Florida East Coast Medical Association, West Palm Beach, Nov. 10, 1927.

blood stream and damage to the various organs. More important than overwork is the element of emotional stress, the drive to an objective irrespective of the feelings of the individual, in the production of an exhaustion state. Emotional stress is certainly a far more important and probably the most potent single factor in the causation of this disorder. An emotion is not merely a state of mind. It is an adjustment on the part of the individual to meet some condition of importance in the struggle for existence and reproduction. Too frequently we have been inclined to lay great stress on the conscious side—the feeling—of emotion and to consider the bodily changes, the alteration in muscle tonus, the changes in the respiratory and cardio-vascular adjustment, the changes in the functional activity of the glandular system, and the various metabolic changes, as secondary to this feeling. We must not forget to include also, under this heading of emotional stress, conditions of increased responsibility, difficulties in meeting the increase in the cost of living, business and financial worries or reverses, demands caused by illness of self or family, misfortune, neglect and misbehavior of those near or dear to us, the adjustments required by love and marriage, and finally sudden shocks of accident and strife which may assail us at any time.

Trauma plays an important role. The accident may not produce any structural disability, yet the psychic trauma attached to it brings on functional symptoms. These symptoms are mostly hysteric in type, partially neurasthenic and depressive, and occasionally accompanied by definitely psychotic phases. The condition is really a disease entity in itself and will not be discussed at this time.

Infective fevers, chronic intoxications with lead or arsenic, syphilis, morphine, and such exhausting conditions as starvation, hemorrhage, rapidly recurring pregnancies with prolonged lactation, etc., may all form the starting point of a true neurasthenia.

*Symptomatology.*—The onset of neurasthenia is usually very insidious in spite of the fact that a rather definite date can be named as the beginning of the patient's symptoms. Various apprehensions and inadequacies arise from time to time. The individual may succeed in suppressing these for a while, then there is usually some definitely acute incapacitating stress, bodily or psychic, which the individual can not throw off. He

finally gives way to his feeling of inadequacy and becomes convinced of the existence of some infirmity, instead of continuing to recognize and struggle to meet the difficulty in which he finds himself. His feelings have overcome his judgment and offer an explanation for his failure to meet the situation. The picture is very variable, both as to distribution and intensity of the symptoms. This may even be considered as one of the characteristics of neurasthenia.

In classifying the symptoms we shall take the various systems and outline briefly some of the more important complaints associated under each system. Almost all complaints bear the stamp of fatigue or exhaustion. The head feels empty. The patient cannot focus his attention on any one thing except for a very few minutes at a time. The "mind wanders"—memory is poor. The patient feels tired, restless, everything worries him, he cannot rest. The slightest sound, the ticking of a watch, children playing in the house, a bright light in the room, or the conversation of persons on the street worry and irritate him extremely and cause him to become completely exhausted. Careful investigation into his mental state will reveal no impairment of memory, complete orientation, and a stream of thought which is coherent and connected. Insomnia is a frequent complaint. This is relative in a majority of the cases although it may be real; brief periods of sleep being disturbed by sudden starts of the limbs and arms, unpleasant dreams and actual nightmares.

Headache is a frequent complaint. It is most often situated on the top of the head, "as if there were a weight on it," or as a tight band around the head constricting it. It is more frequently bilateral. Effort exaggerates the pain. It is usually worse in the morning and may improve as the day wears on. Photophobia is not uncommon. Color scotomata, "black spots before the eyes" are frequent. Disturbances in hearing, throbbing in the ears, hearing the pulse beat when lying on a pillow, dizziness, and tinnitus not accompanied by an actual vertigo are frequent findings.

There may be other disturbances in the organs of special sense. Disagreeable odors and peculiar taste, especially of certain articles of food, which gives rise to loss of appetite, nausea, and sometimes vomiting, may occur and prove to be very difficult problems to solve. Sensory disturbances are usually rather pronounced. Various parasesthesias numbness and tingling in the extremities,



sensations of coldness, of swelling, of dryness, or of increased local heat, are not infrequent. Rapid fatigability in the muscles upon the slightest exertion is one of the most striking and constant findings of neurasthenia. The rapid appearance of fatigue is definite and has been shown by ergographic tracings. This fatigue, however, is usually most marked when associated with some definite act which involves a given group of muscles. For instance, a piano player whose main means of support depends upon his ability to play becomes rapidly exhausted and unable to continue his occupation, yet he is able to use the same group of muscles to good effect and without fatigue for other purposes. Muscle cramps and jerkings and spasmodic contractures occur at times and often frighten the patient and the family because of the suggestiveness of an oncoming paralytic stroke.

*Physical Findings.*—As a general rule the physical examination fails to reveal any evidence of organic disease. For the purpose of reviewing some of the more outstanding characteristics of the usual well-marked psychoneurotic, an abstract of a common routine physical examination is given. The patient is an unmarried woman of 34 who is employed as a secretary in a business office. She complains of indigestion, loss of appetite, nervousness, and "feeling tired." She is rather tall and thin, being approximately 30 pounds below her ideal calculated weight. The mucous membranes are a trifle pale. The hair is fine and dry. The eyes are normally prominent. The pupils are slightly dilated. They react actively to light and accommodation. Ophthalmoscopic examination reveals no gross lesions in either fundus. There is no tenderness over the sinuses or mastoid region. Nasal breathing not impaired. Hearing is grossly normal, air conduction being better than bone conduction. The teeth are in good condition. The tonsils have been cleanly removed. The thyroid gland can not be felt. There is no general glandular enlargement. The chest is of the long thin type with a narrow costal angle of less than 90 degrees. Expansion is  $2\frac{1}{2}$  inches. The lungs are entirely clear. The apex beat of the heart is in the 5th interspace 8 cm. to the left of the mid-sternal line. There is no increase to the right. No shocks or thrills can be felt. The sounds are of fair muscular quality and are clear at the apex and base. The radial pulse is of medium to low volume, regular at 44 to the half. The radial vessels are soft. The blood pressure is 100/68.

The spine is straight. There is a slight tenderness over the upper lumbar spine. The abdomen is natural in appearance. The walls are thin. There is a slight gaseous distention present with fullness and gurgling in the right lower quadrant. The descending colon can be palpated and is a trifle spastic. The lower half of the right kidney can be felt. It is not enlarged. The inguinal glands are not enlarged. The patellar reflexes are present and hyperactive. The deep reflexes of the arms are active. Plantar response is normal. The palms are rather moist. There is active vasodilatordermatographia. No ataxia. No gross sensory disturbances.

*Laboratory Findings.*—1. The urine is of a low specific gravity and contains a trace of indican, a few white blood corpuscles and numerous amorphous phosphates. 2. Blood shows a hemoglobin of 70% with slight reduction in the red cell count. 3. The kidney function test is 62% in 2 hours. 4. Wassermann is negative. 5. Test meal shows a free hydrochloric acid of 60%, combined acid of 21%, and a total acidity of 81%. Otherwise negative. 6. Stool examination shows no occult blood or ova. 7. Gastro-intestinal series shows an active peristalsis, no filling defects, caecal stasis, and a slightly spastic colon. This would conclude our usual routine examination of the patient. Special tests are indicated in many cases. Basal metabolic determinations, X-rays of the heart and lungs in those cases whose chief cause for apprehension about themselves is centered around these organs. Various other examinations by men especially trained in one line of practice are indicated and should be secured when there is an indication. I refer to special examinations of the nose and throat, eyes, pelvic organs in the female, and the prostate and seminal vesicles in the male, etc. At this juncture it is very important to mention the absolute necessity of making a thorough and exhaustive examination, for the psychoneurotic more than any other type of patient must have the utmost confidence in the physician since his ultimate cure depends upon his willingness to accept the doctor's word when he is told that a certain symptom does not mean organic disease is present and that the symptoms will subside in due time. This confidence is gained chiefly by thorough examination. For example: a patient has discomfort in the right lower quadrant and decides that this feeling is due to the presence of a chronic appendicitis. The physician tries to reassure him that it is only

gaseous distention which is probably due to chronic constipation. Straightway he will ask, "How do you know, you haven't made any X-rays of my appendix?" If, therefore, our examinations are not thorough even to the point of almost over-examination, there is always the danger that we will be called upon to make statements which we can not back up at some stage in our after-treatment of these cases.

In working out the diagnosis of neurasthenia there are two essential points to be kept in mind. First the distinction from organic disease; and second, differentiation from other types of functional disorders and the psychoses.

In differentiating neurasthenia from organic disease it is necessary to rule out the presence of infectious fevers, syphilis, tuberculosis, malaria, etc.; from the chronic intoxications caused by lead, morphine, and alcohol; and from certain endocrine disorders, namely, Addison's disease, Graves' disease, Bright's disease, diabetes, etc. These points of differential diagnosis are not included here.

In differentiating it from certain other functional as well as organic diseases of the nervous system, it is important to keep in mind psychasthenia, hysteria, traumatic neuroses, and mild depressive states, the so-called cyclothymic states.

Of the complications and sequela, the most serious as regards prospects of life, are connected with limitation of food and general unhygienic mode of life which may result in actual starvation and exhaustion or the liability to invasion with the diseases of inanition.

*Treatment.*—Neurasthenia being a psychogenic disorder, it is obvious that treatment must be psychic in character. The condition seems to be due to a faulty adjustment to the conditions of life and hence it follows that recovery means the adoption of modes of reaction which will prove satisfactory. The patient needs to be shown wherein his error lies and how to correct it. This is not a simple task which can be performed in a few minutes by writing a prescription or performing a surgical operation, but requires careful investigation of all the facts and diligent and concerted effort by the physician without which no permanent results can be hoped for.

Of the psychotherapeutic measures most commonly employed the best known are suggestion and persuasion. Suggestion attempts, by authoritative reiteration, to introduce a belief into the patient's mind, which if accepted, will coun-

teract the beliefs and fears which make up the patient's disorder. Persuasion, on the other hand, consists in actual instruction of the patient in the mechanisms by which he has come to behave as he does by analyzing the facts as given by the patient. Of the two methods the latter is by far the superior, for it most certainly amounts to an entire re-education of the patient. Here again let us emphasize the great importance of a thorough examination of the patient, not only to avoid errors in diagnosis, but also with the idea of satisfying the patient that the physician knows his business and is therefore a fully competent and conscientious adviser and teacher. After the facts are gotten, the next step consists in reconstructing from these facts the mode of development and real significance of the various subjective manifestations. The patient should be made to understand that the disappearance of certain symptoms rests with himself and his willingness to relinquish them.

The details of actual management are important, although they vary in many cases. 1. Removal of the patient to a hospital or nursing home. 2. A special nurse, one who has had experience in the management of similar cases, is of great importance. 3. Strict isolation from family and friends with no letters, telephone calls, etc. 4. Rest in bed, on an average of about four weeks. 5. Dubois mild diet if the diagnostic study is not completed and a stool examination has not been made, also gastro-intestinal series. Later a general diet with forced feeding of milk and eggs. 6. Occupational therapy. 7. Hypodermic injections of various iron and arsenic preparations seem to be of value. 8. A bitter tonic to stimulate the appetite. 9. Bromides to relieve extreme nervousness and insomnia where indicated. 10. Mechanical laxatives to insure proper elimination.

After an average of three to four weeks, when the patient is beginning to show definite improvement with a gain in weight, a regime of increasing activity is important. Walking, with an increase of five minutes a day until he is walking at least 30 minutes twice a day; golf, tennis, swimming, horseback riding, etc., are of value and should be insisted upon and carried out every day almost irrespective of the desire of the patient. Instructing the friends and relatives regarding their attitude toward the patient is of great importance and should not be overlooked. They must realize that he is coming home fully able to

cope with ordinary conditions of life, and that he must not be regarded or treated as an invalid.

The prognosis as to complete recovery and restoration to full functional activity is essentially good, provided proper treatment is adopted. It is modified by the period of duration of the disorder and how deeply established the habits are. Neurasthenia never leads to insanity. There is no danger of suicide in a true neurasthenic. Occasionally death may result from starvation and severe exhaustion.

## THE SIGNIFICANCE OF HEMATURIA TO THE GENERAL PRACTITIONER\*

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To no other symptom in all medicine is there attached more importance and less attention by both the physician and the patient than the symptom of hematuria. Although this may seem rather a rash statement it is one that we must admit can be supported in fact by a large group of statistics from many different authors who have written quite extensively during the past decade upon this one topic which is of such vital interest to all.

Hematuria is not a disease; it is purely a symptom of a disease, and there has never as yet occurred a hematuria which did not indicate some diseased condition at some place along the genitourinary tract, either local or remote, although this disease may not be easily demonstrated.

It would certainly seem that a condition of blood in the urine would be of sufficient importance to impress upon both the physician and the patient the necessity of a thorough examination by one competent to determine the source and the cause of the bleeding. But in a great many cases both the patient and the physician have failed to realize that the oftentimes painless sign of hematuria is but the forewarning of impending calamity. There has been a tendency, in many instances, on the part of the physician to temporize with the situation and to lure both himself and the patient into a sense of false security by the administration of drugs and by giving assurance that the symptom is only temporary and of trivial importance.

That hematuria is a symptom not uncommonly encountered and which is easily recognized is

known to all, and if only enough emphasis would be placed on the importance of an early, thorough and comprehensive examination, a great many patients could be benefited and cured by recognizing and treating the disease in its early stages. It is upon the general practitioner that the burden of this important duty rests. It is the family doctor, in easily 90% of the cases, to whom the patient will first carry news of his alarming discovery. Only a very small percentage would consult a urologist. Should the physician forget his duty to his patient by false pretense or ignorance of the importance of the condition and delay the investigation as to the source of the bleeding, irreparable damage may be done by some diseased condition that may have been remedied by earlier treatment.

It cannot be too strongly emphasized that hematuria means blood in the urine. It does not necessarily mean that it must be found at every examination. One demonstration of red blood corpuscles in the urine by means of the microscope or by seeing a specimen grossly colored by blood is positive and conclusive evidence of the existence of some cause that demands investigation at the earliest possible time.

No branch of surgery or medicine today is confronted with more problems arising from the belated appearance of patients with symptoms of long standing than is the field of urology. It will be surprising as well as impressive to know that a statistical review of all patients, presenting hematuria as the most prominent symptom, who have entered the Peter Bent Brigham Hospital,<sup>1</sup> during the past 12 years, shows that an interval of over two years elapsed between the first appearance of the symptom and the time they sought consultation with the department of urology. Kretschmer<sup>2</sup> in an analysis of 933 consecutive cases of hematuria found that an average of 2.3 years elapsed between the onset of the hematuria and the time a proper examination was undertaken. Chute,<sup>3</sup> Eisendrath,<sup>4</sup> and many others have emphasized the importance of the symptom and have reported equally disappointing figures as to the interval between the onset of bleeding and the time the patient sought examination. Such reports, coming from men seeing a large number of patients, would seem to show that the delinquency or negligence on the part of the patient, and in many instances on the part of the physician, is general.

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It seems hardly necessary to call to mind the many improvements and the advances that have been made in the field of urology during the past few years that have been of such proven value as to make this branch of medicine one of the most accurate in the determination and estimation of its attendant affections. Since the advent of the cystoscope and the ureteral catheter with the conjoined use of the X-ray, through the medium of the pyelogram, it is almost without exception that a correct diagnosis can be made, provided the examination is thorough and painstaking. In Kretschmer's entire series of 933 cases a diagnosis was established in 96.8% of all cases, a figure which speaks for itself as to accuracy of the examinations.

Thus with such an armamentarium composed of means and methods of establishing accurate diagnosis the field of urology becomes an instrument in itself, that when placed in the hands of the general practitioner, and used judiciously, is of inestimable value.

It will be of interest to consider some of the statistics at hand, illustrative of the high percentage of malignancy and other serious diseases found in patients presenting hematuria as a prominent symptom.

The time in life when hematuria is most commonly noted is between the ages of 30 and 60, although it may occur in the very young or very old. The symptom is noted in males and females in the ratio of about 3 to 1, this being because of the benign and malignant lesions of the prostate and bladder that are so commonly encountered in males.

In going over the large groups of cases of hematuria reported, I have found that the series reported by Kretschmer<sup>2</sup> is the largest group of consecutive cases to which I have reference and such a large number of cases can be considered to be representative.

A gross division of the cases, as to the location of the bleeding point, will show that lesions of the kidney stand first as a source of hematuria, comprising a total of 331 cases or 39%. Next in order of frequency come lesions of the bladder totaling 307 cases or 37%. Lesions of the prostate formed 126 cases or 15%, lesions of the ureter 54 cases, lesions of the urethra 6 cases, and the general disease group a total of 9 cases. The general disease group included those causes remote from the genito-urinary tract, such as pur-

pura, cirrhosis of the liver, Banti's disease, and hemophilia.

Considering malignant diseases of the genito-urinary tract as first and foremost from a standpoint of importance, it is found that they comprise 244 cases of the entire series of 933. 154 cases were due to stone at some point along the tract. 97 cases showed tuberculosis to be the cause of the bleeding, and the remaining 438 cases were due to miscellaneous causes of which benign hypertrophy of the prostate, and the acute infections, such as hydronephrosis, pyelitis, and cystitis and the benign tumors formed the greater percentage, hematuria from gonorrhea not being included. It is thus seen that practically every case of the entire series was one which necessitated intervention by some surgical measure or some non-surgical measure by means of the cystoscope.

Chute,<sup>3</sup> some eight years ago, in going over a series of 100 consecutive cases, found that a new growth of some sort caused the bleeding in 64 cases of the entire 100. In 1924 he examined another one hundred consecutive cases and found that of this series 44% represented malignancy and a considerable number of other cases showed disease which seriously threatened the integrity of the organ involved. Not only do these cases prove the importance of the necessity of an early diagnosis of the causes of the hematuria, but they show the startling average length of time that elapsed between the onset of the bleeding and the time examination was sought.

To the patient who represents a gross hematuria the simple two glass test will indicate the source of the bleeding and will determine at once whether it arises from above or below the external sphincter muscle of the bladder. Any bleeding along the course of the anterior, or pendulous, urethra will flow out through the meatus. If there is bleeding between the external and the internal sphincter muscle, that is, the prostatic and the membranous portions of the urethra, the blood, if small in amount, will fill the deep urethra and appear in the first glass. If the amount is considerable, it will flow back into the bladder, on account of the external sphincter being stronger than the internal, and both glasses will be clouded with blood. The bleeding that is very frequently seen at the end of urination and associated with or without tenesmus usually comes from the posterior urethra or from acute inflammatory conditions of the trigone of the bladder

involving the internal sphincter. In some instances, a sharp pointed bladder stone will cause a small amount of bleeding at the end of urination when the stone moves down to the orifice of the bladder. Blood which comes from the acute infections of the prostate usually empties itself into the posterior urethra and appears in the first urine, but if the amount is large in quantity, which is unusual, both glasses will show blood. Bleeding from the seminal vesicles practically never manifests itself except after the act of ejaculation or by stripping the vesicles by massage.

When both glasses are clouded it is safe to conclude that the bleeding is coming from the prostate gland itself or from some point above the prostate. When only the first glass shows blood the bladder, as the source of the bleeding, can be ruled out in the large majority of instances. Gross bleeding from the bladder may represent bleeding from higher up in either kidney or ureter or it may result from lesions of the bladder, the most common of which are the benign and malignant hypertrophy of the prostate, (the benign type more commonly giving rise to hemorrhage than the malignant) tumor, and stone. Smaller amounts of bleeding are occasionally caused by incrustrated cystitis, diverticuli, and ulcers. The old belief that hemorrhages arise from varicose veins of the bladder has been disregarded.

The majority of the bleeding that comes from the ureters is caused by stones, and most often by stones that are moving down the ureter. The stone which is lodged fast in a ureter usually does not manifest itself by bleeding. As to whether or not any bleeding is produced by strictures of the ureters is a matter of doubt, although it is so contended by some writers. Scar tissue, it is to be remembered, is highly avascular tissue and will withstand considerable trauma without bleeding. Then, too, before it is to be decided whether or not ureteral strictures produce hematuria, it must first be necessary to settle the issue of the existence of the true stricture of the ureter, as up to the present time the controversy is only in its infancy.

Of greater interest, perhaps, because they are of greater frequency and offer a more difficult problem in diagnosis, are the hematurias which originate from the kidneys. To the so-called "general" conditions giving rise to hematuria, attention has already been called, and in connection with these general causes it will be well to call

attention to the necessity of making a differentiation between hematuria and hemaglobinuria, because in some instances it is confusing. The distinction between the two can be made first by color, second by careful microscopic examination, and third by means of the spectrum. Only recently I had a patient who was certain she had been passing blood in her urine for the past eight years at intervals, but who had always been told that it was caused by malaria in her system and that it was not real blood. Her only other symptom was a low backache. X-ray examination showed a large opaque shadow occupying the entire pelvis of the left kidney. At the operation a large coral-shaped stone was removed. She has been well since that time with no recurrence of the bleeding.

The idiopathic, or co-called "essential" hematurias, are very perplexing and constitute one of the shortcomings of both the urologist and the pathologist as regards finding the proper cause for the condition. They are almost always painless bleedings and usually of small amount and involve most often a single kidney. Many causes have been contributed but very little has been accomplished toward arriving at an understanding of the condition. I have seen one patient with a quite severe hypertension who passed considerable blood from the left kidney which finally subsided when a reduction was made in the blood pressure. This was one of the few instances where the bleeding could be very probably attributed to hypertension, as all other findings were entirely negative. In many of these hematurias no cause can be found and in one of these kidneys, that I saw removed to stop the hemorrhage, no cause could be demonstrated by the pathologist to account for the bleeding. Some instances have been reported of nephrectomy being done on one side and the bleeding starting up in the other kidney at a later date.

Probably the most common cause of bleeding from the kidneys is the presence of free-moving stones in the kidney pelvis, the smaller stones having the greatest range of motion and causing the most bleeding. This hematuria is most often accompanied by pain produced by the stone. The large fixed stones lying in the pelvis of the kidney, or in the calyces, are not so apt to produce bleeding.

Tuberculosis almost always produces bleeding into the urine and this may represent one of the very first signs of an incipient tuberculosis. Oc-

casionaly, the hematuria may be massive and much pain may be caused by clots of blood passing down the ureter, but this is encountered more often in the later stages of the disease.

Cancer, hypernephroma, papilloma, and other tumors of the kidney may produce varying degrees of hematuria, depending upon how much involvement of the kidney pelvis or calyces has taken place. In some tumors, as in a spindle cell sarcoma of the kidney that I helped to remove a short time ago, in which the entire kidney was found to be destroyed by the tumor, there was never any history of finding blood in the urine, due to the encapsulation of the tumor by fibroid tissue with no breaking through into the calyces or pelvis.

The acute infections of the kidney, such as pyelitis, pyelonephritis, and pyonephrosis, may sometimes produce hematuria. And there is always the possibility of finding foreign bodies along the genito-urinary tract that may produce bleeding. Hugh Young<sup>5</sup> reported a very interesting case of a young woman presenting the symptom of a pricking sensation in her bladder for the past six months, which was occasionally associated with hematuria. This she felt quite sure was due to a pin she had swallowed some seven years before, and gave a very good description of how the pain had progressed down the abdomen to the region of the bladder. By means of a cystoscope a pin was found sticking in the wall of her bladder.

A word might be said here about an association of conditions that is undoubtedly of interest to all, and that is the hematuria that is sometimes found associated with acute appendicitis. It is stated by Eisendrath that this hematuria can no longer be stated as being of local origin. A certain small group of cases may be due to the inflamed organ being adjacent to the ureter and transmitting the inflammatory condition by the contiguity of structure or through the lymphatics. In the great majority of cases, however, ample clinical evidence can be demonstrated to show that the hematuria is the result of an acute or sub-acute glomerulonephritis, due to a hemogenous infection of one or both kidneys.

As this communication is not here concerned with a consideration of the details of diagnosis and the proper treatment of the symptom hematuria, it may be dismissed with a word. It is always important in dealing with hematuria in females to be certain that the urine is not contaminated by the menstrual flow, and a catheterized

specimen is always to be desired. It is surprising to sometimes find women who seem unable to tell exactly whether blood came from the vagina or in the urine, and trusting always to the specimen the patient brings may lead one astray.

#### CONCLUSIONS.

1. That hematuria is not a disease in itself but is only a symptom of a disease, and should always be considered to be a sign of grave disorder or disease along the genito-urinary tract.

2. That the long period of time that has been found to elapse between the time of the onset of the bleeding and the time the patient sought examination is evidence of the lack of importance that has heretofore been attached to the symptom.

3. That every case presenting hematuria as a symptom should undergo a most thorough and comprehensive genito-urinary examination to determine the origin and the cause of the bleeding.

4. It is upon the general practitioner that the all-important duty of recognizing the importance and emphasizing the necessity of early investigation of the presence of blood in the urine rests.

5. If a reduction in the mortality and an increase in the number of cases benefited is to be hoped for in these most serious diseases of the genito-urinary tract, patients must seek examination early while the disease is still in its incipency and not wait until a time when it has progressed to such an extent that it is beyond all hope of relief.

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#### PROSTATIC HYPERTROPHY\*

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My subject, prostatic hypertrophy, is of interest to all physicians engaged in the general practice of medicine, since they are constantly being consulted by patients suffering from this disease. However, it may be said without fear of refutation, that no other disease of like severity is so frequently encountered which receives such slight thought and attention, both as to diagnosis and treatment.

If this were a rare disease, it might be said in

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extenuation that errors in diagnosis and treatment were justifiable as a result of such rarity, but this may not be offered as a plea, since there is not a town, village or rural community that does not have its quota of elderly men suffering from this affliction. There is no excuse to be offered for its non-recognition, for it is ubiquitous, and its diagnosis obvious, when the subjective symptoms and the patient's age are together taken into consideration. The symptom-complex associated with it might be held responsible for its not being recognized, if the age of the patient were not a diagnostic factor suggesting the true underlying cause, for not infrequently these elderly patients, so afflicted, first seek relief on account of digestive disturbances, or nervous symptoms, and give no history referable to the urinary system, unless the questioning of the physician calls attention to it.

Nicturia is practically always associated with this disease, but its onset may be so gradual as to escape the patient's attention in the early stages of the malady. Nicturia is, however, the symptom which causes the patient to seek medical aid for what he terms "bladder or kidney trouble." This self-made diagnosis is a correct one, for in the greater number of cases of prostatic hypertrophy there are bladder disturbances associated with secondary kidney lesions.

The tendency of the physician should be to fully ascertain the underlying cause of this "bladder or kidney trouble," but the converse is true, for usually the patient is accorded a very desultory examination, and is, as a matter of form, prescribed some of the commonly used urinary antiseptics, without the cause of the symptoms being determined.

It is not supposed that the physician engaged in the general practice of medicine should be equipped to make a complete examination of a patient suspected of having this trouble, but he should, at least, be sufficiently conversant with this disease and its cardinal symptoms, so that it may not pass unrecognized.

Why symptomatic, or palliative, treatment should be given for a condition that is so obviously amenable to surgical treatment only, is a question demanding explanation. No physician would consider prescribing medicinal treatment for the relief or cure of a fibroid tumor of the uterus, but no hesitancy is felt in treating prostatic hypertrophy by this means, yet, this so-called hypertrophy is nothing more nor less than a tumor for-

mation of the gland. The only logical reason why surgical treatment should be advised for a tumor of the uterus, and symptomatic, or palliative, treatment for a tumor of the prostate is, there must be a lack of appreciation of the fact that prostatic hypertrophy is a neoplastic disease.

That the distinction between prostatic hypertrophy and chronic prostatitis, due to infection, is not clearly understood, is evidenced by the manner of treating the disease. For instance, massage is indicated in the treatment of chronic prostatitis of infectious origin, but it certainly offers no hope of causing a reduction of the glandular enlargement due to prostatic hypertrophy; yet, it is usually employed in the treatment of this condition, with the obvious expectation that it will produce this result. In all probability, instead of having this tendency toward effecting a betterment in the glandular structure, it causes harm. This is well explained by Wm. S. Ehrlich, of Evansville, Indiana, in a paper read before the Ohio Valley Medical Association, at Evansville, in November, 1923, who states: "If the tumor be a simple adenoma, massage, by stimulating circulation, causes a rapid increase in its size; and if it be malignant in character, as about twenty-five per cent are, no more effective way could be devised to produce metastasis."

As stated in the quotation just cited, about one-fourth of all cases of prostatic obstruction become malignant, therefore, no more forcible argument against palliative treatment may be put forward than this. It is essential for a correct early diagnosis to be made, so that prostatectomy may be performed in order that the patient may escape malignant degenerative changes later on in the course of his disease.

As previously observed, physicians engaged in the general practice of medicine are not equipped to make complete examinations of these patients, such as cystoscopic examinations, etc., but no excuse may be advanced for not determining the size, contour and consistency of the prostate by palpation through the rectum, and the amount of residual urine by catheterization, immediately following urination.

The contour and consistency have a certain diagnostic value in ascertaining whether the neoplastic growth be benign or malignant, but the size of the gland is not always indicative of the amount of the retention. A comparatively small gland may cause a large residual urine, as a median lobe enlargement the size of an ordinary

grape may cause severe dysuria and retention, to a marked degree. This, fortunately, is a rare finding and can only be demonstrated by cystoscopy.

The presence of residual urine is a diagnostic factor of the first importance in making the diagnosis of prostatic hypertrophy, since it is nearly always associated with it to a more or less degree. If this residual urine is found to be constant and amounts to as much as two ounces, prostatectomy should be advised, as no method of treatment, other than surgical, will cause a reduction in the amount. The inevitable result is, that if not relieved by operation, the quantity increases as the gland enlarges, and destroys the kidneys by the back pressure exerted upon them, together with the resultant infection.

Bladder catheterization for the determination of the amount of the residual urine is not always easily performed, as the enlarged gland mechanically obstructs the passage of the catheter. As a consequence of the glandular enlargement, the urethra is elongated and distorted, which causes the catheter to engage at, or near the apex of the gland and prevents its further introduction. This inability to pass the catheter leads to the diagnosis of stricture of the urethra being made, which is erroneous, as the lumen of the urethra is not constricted in any portion of its length.

Not infrequently, patients are seen with complete retention of urine, who have suffered much trauma to the urethra as a result of forcible introduction, or attempted introduction, of metal catheters. In passing, it may be stated this type of catheter is a dangerous one, and should be relegated to that class of instruments which have become obsolete. If one does not possess a complete line of catheters, and is unable to insert a soft rubber one, it is better if the bladder distention is great enough to cause the patient much suffering, to introduce a long hypodermic, or aspirating needle into the bladder, just above the pubic arch and in the median line. This may then be attached to a large Luer syringe and the distention relieved by aspirating the urine. There is no leakage into the tissues following the withdrawal of the needle, and no harm results from this procedure.

In writing this paper, I have refrained from taking up in detail subjects of no interest to you, such as the intravesical appearance and condition associated with prostatic hypertrophy, as shown by cystoscopy; the determination of renal func-

tion, as evidenced by the phthalein test and blood chemistry determinations, etc., as well as all mention of the operation itself, and the operative routes. Such things are of no interest to anyone except the urologist. I have no desire, nor intention, of criticising the general practitioner of medicine, other than to emphasize the fact that he is inclined to be more lax in his examination of this class of patients than he is of that of any other. Many reasons may be advanced for his seeming indifference as to thorough examination and proper treatment of prostatic patients, but none may be offered which are justifiable.

### HEMOTHERAPY\*

#### A NEW METHOD IN THE TREATMENT OF VOMITING OF PREGNANCY.

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West Palm Beach.

As one turns the pages of any text dealing with hyperemesis gravidarum he finds a varied etiology to confuse him. And later, in treating patients so afflicted, all efforts toward removal of the seeming cause lead him to little short of exasperation. We feel the mental chaos a student experiences the first time he hears a dermatologist make the statement, "One skin disease may have many causes and one cause produce many skin diseases." In reading this paper, I do not want it understood that vomiting of pregnancy has but one cause nor that there is only one rational treatment.

Text-books usually divide the etiology into: reflex, neurotic and toxemic. The two latter causes, to my mind, do exist; however, I seriously doubt the first named factor. In my experience, I have been unable to find a single case and believe any cures resulting from efforts to correct malposition, etc., are simply brought about by suggestion and that such cases are neurotic. The neurotic type I shall not discuss. The toxemic type is the class with which this paper will deal.

A Spanish physician, Udæta, in a letter published in the Journal of the American Medical Association, vol. lxxxii, page 902, 1924, opined vomiting of pregnancy is a toxemia resulting from absorption of products of gestation; and analogous to reactions after blood transfusions from incompatible donors, or introduction of foreign proteids. And he further assumed the foetus to acquire the father's characteristic protein complex.

\*Read before the Florida East Coast Medical Association, West Palm Beach, Nov. 10, 1927.



Such an assumption would infer that foetal albumen escaped through the placenta into the maternal circulation, which fact is doubtless true. If the toxemia caused by the introduction of foetal albumen is analogous to the reaction caused by an incompatible blood transfusion, then such toxemias must only exist in such cases where the blood of the foetus is incompatible with that of the mother, and in such cases we might be able to vaccinate, or rather desensitize the mother against the toxins introduced in small quantities into her circulation, just as we do in the asthmatic.

Just as this thought had matured in my mind, I had left the hospital where I had interned and started practicing in a small town in Texas. Material was scarce and laboratory facilities poor; I had no definite plan. However, a case did present itself and on Udæta's theory that the child acquired the father's characteristic albumen complex, I injected subcutaneously 5 cc.s of the father's whole blood. The case had been vomiting for several weeks; the patient very weak and acetone was present in the urine. The results were most happy. In forty-eight hours there was quite a marked discoloration at the site of injection, which alarmed the patient and family. Another similar dose was injected but intramuscularly; there was no reaction from either dose and no pain to amount to anything. Within a week the patient was eating everything and nausea and vomiting had completely disappeared. I left Texas before this patient delivered, so I cannot state the final outcome; however, the patient had been two months pregnant at the time I first saw her, she had been vomiting since the fifth week of pregnancy and up until her sixth month there was no further complaint.

My next case did not end so happily. A colored woman nearly three months pregnant had been vomiting over a month and growing progressively worse. I treated her as I did the other; she had a marked acidosis and in spite of the additional therapy of the insulin, buffered with glucose intravenously, death was the result.

Now, enthusiasm was dampened and I began to feel the theory of the Spanish obstetrician was to be put in the same category as Williams placed the theory of Fieux. Fieux, in *Serotherapi Annal de Gynecologie et Obstetrics*, 1912, page 718-725, reported cure of vomiting of pregnancy often following injection of 20 cubic centimeters of blood taken from a healthy pregnant woman.

Williams states in his text, page 558, that he was unable to confirm such results and when they are obtained, gives credit to the effect of suggestion. He infers the effects are only successful in certain cases of the neurotic type. I shall refer to the results obtained by Fieux later in this paper.

Just at this time I obtained a reprint of a very able article on this subject written by Dr. Will S. Horn of the Harris Clinic, Fort Worth, Texas, and published in *Texas State Journal of Medicine*, 1925, page 180-185. This article had incorporated in it some convincing tabulations. He, by his work and laboratory findings, had now thrown much light on the dark spots in the theory of Udæta and the reported cases of Fieux.

Dr. Horn's first case report covers the application of his belief in Udæta's theory. A woman seven months pregnant had been referred to his clinic for a therapeutic abortion as the only means of saving her life. This patient had been vomiting since the fourth week of pregnancy. She had not retained anything for ten days. Her blood was cross-tested against that of her husband and a double agglutination took place. Dr. Horn injected one cubic centimeter of the blood of the husband subcutaneously into the patient; twenty-four hours later, five cubic centimeters and then two more five cubic centimeter doses at twenty-four-hour intervals. The outcome was striking: In forty-eight hours nausea had disappeared and the patient feeling fine, eating, drinking and retaining all food. She gained five pounds the first four days of treatment. Glucose intravenously had been used to combat a severe acidosis. After hemotherapy no further treatment was required. A healthy child was born two months later, and the blood of the patient, the father and of the child were typed. Father showed type II, child type II and mother type III. You will note the father and child were of the same blood type and the mother type III. Udæta's conception seemed correct, but why did my second case of the colored woman end so disastrously? Why could Williams not confirm Fieux result?

Dr. Horn's paper is very enlightening on this subject and the answer to these questions is Udæta's hypothesis is correct as far as it goes, except that the foetus does not always acquire the characteristic albumen molecular complex of the father. He shows this graphically in his tabulation of cases where he has typed the bloods of both parents and of children in a great number of instances. For example, in his first case tab-



ulated a type IV mother and type IV father are shown as producing two type II children. In his second example two parents, both type II, produce a first offspring of type IV and a second of type III. Doubtless, if one had the opportunity of typing a large number of families, he would find Mendell's law to hold true.

From this investigation it is obvious that the blood of the father is not always the same as that of the foetus. However, it is more often the case. Then, I attribute my first failure to the fact that I did not have blood of the same type as that of the foetus; in other words, the foetus was of a different type than its father, whose blood I used as a vaccine. And furthermore, Fieux must have been successful in those cases where he obtained his blood from women of the same type as of the particular foetus involved. And Williams probably could not confirm Fieux's work because of the fact that the blood injected was not always of the same type as the foetus involved.

Dr. Horn further shows that type IV blood, which is the universal donor type, rarely manifests slight disturbances on the part of a mother carrying a child of this type. Where mother and child are of the same type, nausea and vomiting is also slight; likewise, it may be assumed that mothers of type I, the universal recipient, should not exhibit any marked degree of hyperemesis gravidarum.

All of this was very interesting and again enthusiasm was high. Dr. Horn had also shown that something could be done in those cases where the father's blood did not correspond to that of the foetus. He reduced hemothrapy to a scientific basis. He showed where, after failure with a trial of paternal blood injection, that success could be obtained by typing mother and father and then injecting blood of other types than that of either parent. His tabulation showed success and his therapy is reasonable.

As I said before, I was enthused. I still find material is not as plentiful as I should like to have it in order to thoroughly convince myself of the fact that this method of therapy will be effective of good results 100% of the time. However, I did find several more cases and treated the first blindly, injecting the blood of the father into the pregnant mother with happy results. Other cases came which did not respond to such blind treatment. Laboratory facilities were not available, hence these cases were given pooled blood type I, II, III with striking improvement.

I regret to say I kept no record of these cases, as I did not contemplate reporting my findings at that time.

There was one case in this last-mentioned group upon which a therapeutic abortion was done. This patient had a horrible acidosis at the time she consulted me. She responded to treatment but refused further therapy after the second injection. However, her acidosis cleared up and vomiting was reduced 75%. She had a ventral dioxation of the uterus done some years before and complained so bitterly of abdominal pain that I was forced to refer her as above stated.

Up until this date I have done no laboratory work on my cases, hence I am forced to incorporate Dr. Horn's statistics. I hope, as more material becomes available, to type all such families and tabulate the findings.

As to whether vaccination with a given blood confers a permanent immunity, I cannot say. More work will have to be done on that point. Again, whether or not the other toxemias of pregnancy, such as eclampsia, have the same etiology and would be prevented by the same therapy, I am unable to say. In compiling statistics, it would be well to watch any such mothers having received this therapy and to make note of the fact, should eclampsia occur in any of them. It would be well, also, to type all eclamptics and any living infants born to them while in that state in order to answer this last question.

One word of warning—all of us know that there are patients who appeal to us for what they would lead us to believe to be a therapeutic abortion, giving as reasons pernicious vomiting of pregnancy. For such maligners, hemothrapy will be of no avail.

#### SUMMARY.

- (1) Vomiting of Pregnancy has the following etiology:
  - (a) Reflex—I doubt if this is a cause.
  - (b) Neurotic.
  - (c) Toxemic.
- (2) Toxemia is caused by absorption through placental circulation of products of gestation by foetal blood escaping into maternal circulation.
- (3) Effect is similar to reaction in blood transfusion of incompatible blood.
- (4) Mother can be immunized and vomiting cured by vaccination with blood from another individual of the same type as that of the foetus.

- (a) Father's blood usually same as foetus in such cases.
  - (b) If not, can type father and mother and obtain blood from other donors.
  - (c) Type IV foetus and type I mother should exhibit very little nausea and vomiting during pregnancy, owing to the one being a universal donor and the other universal recipient.
- (5) Thanks to Dr. Will S. Horn, Fort Worth, Texas, for his paper and laboratory work in support of theory.

#### OTOMYCOSIS\*

N. W. GABLE, M.D.,  
St. Petersburg.

The object of bringing a paper of this nature before you is to direct attention to the more frequent occurrence of otomycosis in our warm, moist climates than the colder and dryer climates, found elsewhere.

Otomycosis, or the presence of fungi in the ear, is, in my opinion, found more frequently in Florida than any other place in the United States. This is due, perhaps, to the prevalent moist atmosphere, heat and length of our summers; mildness of winter, frequency of sea bathing and outdoor exercise.

#### HISTORICAL

It was in 1867 that the attention of the medical profession was called to the fact that fungi might cause aural conditions. The condition was first noticed among the Russians in 1867 by Robert Wreten, of Petrograd. He noticed that those most affected were the poorer, undernourished class, who lived in poorly ventilated, damp houses, the dampness apparently favorable to the growth of the mould.

Castellani and Chambers, in the "Manual of Tropical Medicine", report that otomycosis is fairly common in the tropics. In India, during the rainy season especially, there seems to be a sudden increase in the conditions.

A search through the files of the American Medical Association shows only one paper of importance by Chilsom and Sutton, report of the two cases by Miller and report of three cases by Lewis.

#### CAUSATING FACTORS AND PATHOLOGY

It seems that of the various forms of fungi

some prefer or thrive better in a warm dry atmosphere, while others depend on dampness. We find here in Florida the *aspergillus niger*, which thrives best in a warm moist climate. Chilsom and Sutton are of the opinion that fungus is never a primary invader, but occurs only secondary to some other condition, but I wish to take issue with this statement. The ear is, normally, more or less moist due to the ceruminous glands that constantly secrete a moist, waxy substance that could very readily be the seat of the fungus.

The old theory that the fungus was transplanted upon the ear canal by the application of contaminated glycerines or oils can be explained, I think, by the fact that the fungus in the canal causes an itching, and the application of oils or glycerine to allay this condition causes a ready growth of the mould not noticeable before. Therefore, the theory that the oils cause the condition can be explained by showing that they only increase the condition already found.

The fungus, after implantation on the cerumen of a healthy ear, proliferates readily and tends to penetrate the deeper tissue. It sets up an inflammatory process, causing the aural tissues to throw out a serous exudate. This seems to be due to the mechanical irritation and also to toxins produced by the fungus. This leads to an irritation of the whole canal and occasionally an affection of the drum causing perforation. The mass lying on such a delicate structure as the ear drum causes pressure necrosis.

I have been able to find only two cases of middle ear involvement and none of the mastoid in the current literature.

The most common fungus found in Florida is the *aspergillus niger*, which appears grossly in the ear to be a wad of wet newspaper, being a greyish, pasty material, interspersed with black spots, having a mouldy odor, microscopically having the appearance of the usual form of mould containing spores, etc.

#### SYMPTOMOLOGY

The chief complaint with persons affected with otomycosis is itching and burning in the ears, with slight pain radiating down the neck, with slight loss of hearing. This condition causes the patient to try to clean the ear, and in so doing causes trauma, which promotes the growth causing furuncles, etc. There is frequently a slight discharge present which seems to irritate the skin where it exudes from the ear. The discharge is

\*Read before the Pinellas County Medical Society, Dec. 14, 1928.

usually scanty, thick, has a musty odor, but not mucopurulent. When, however, the middle ear is involved, there is usually a mixed infection and the discharge is mucopurulent and has a foul odor.

The other forms of fungus are the dry types, which form crusts in the canal, not unlike the dry eczemas. The most common symptom is a dull, indefinite pain—sometimes just enough to make the patient conscious of having an ear.

#### DIAGNOSIS

There can be no mistake in the diagnosis of a well-developed otomycosis of the niger type. Characteristic is the appearance of the ear canal, filled with a greyish material which is readily removed and leaves the red, irritated canal. The odor and color of the discharge are also very characteristic.

The difference between the dry, scaly type and the dry eczematous type can be determined only by the microscope.

#### TREATMENT

Patients who give the history of eczema or intermittent furunculosis should be especially suspected, the fungus in the canal causing the patient to scratch it, thus breaking the epithelial covering and allowing invasion of staphylococcus and streptococcus. This break in the epithelium also allows a deeper penetration into the tissue by the fungus.

It seems that almost all the drugs of the pharmacopœa have been used in the treatment of this condition. Sutton and Chilsom recommend large amounts of potassium iodide by mouth until the symptoms are relieved. Hatch and Row prefer irrigations with iodoform and boric acid. Other medications commonly used are (a) 95% alcohol, (b) silver nitrate in various strengths, (c) bichloride of mercury in alcohol, (d) various powders of boric acid and zinc oxide.

I have had better results, however, in the following treatment:

1. Apply to the ear canal a small wick saturated in 2% mercurochrome. This is to take care of the staphylococcus and streptococcus, if present. "If 2% mercurochrome is beneficial as a germicide." This wick is kept in the ear for 48 hours and is kept constantly wet with a saturated solution of boric acid and 95% alcohol. This wick is changed every second day until the growth takes on a greyish, withered appearance, usually about one week.

2. The growth is then gently washed out and the canal thoroughly dried with alcohol. If the

canal looks free and clean from any growth, the patient is given 2% salicylic acid in alcohol to be installed three times a day for about one week. The treatment is then omitted for about one week and then repeated for one week. The main point in the treatment is to keep all glycerines and oils from the ear and no aqueous irrigations. Gentle manipulations in the ear canal so as not to injure the epithelial lining. Instillation of some quickly drying substance as alcohol. The alcohol and boric acid quickly dry, leaving the powdered boric acid lining the ear, also acting as a drying agent. The 2% salicylic acid in alcohol stops the burning and itching almost instantly.

#### REPORT OF CASES

*Case 1.* Mrs. H. seen in my office July 16th, 1928, had never had ear trouble until a few days previously, when she noticed an itching and slight loss of hearing in her left ear. Examination showed a greyish mass in the canal covering the tympanum. Usual treatment was begun. Mercurochrome wick placed in the ear and kept saturated with solution of boric acid and alcohol. Two days later patient returned, the mass having taken on a withered appearance, the ear was syringed, the growth removed and the same treatment as above repeated. Upon her return two days later, there being no signs of fungus, the wick was omitted and a 2% solution of salicylic acid in alcohol substituted. After one week the patient returned and the ear seemed normal. Itching and pain ceased after first treatment. No recurrence.

*Case 2.* Mrs. J. seen in my office January 21st, 1928, complaining of pain in the ear. Examination revealed furunculosis of both ears superimposed on a fungus growth. After opening furunculosis and patient made easy for a few days by phenolated glycerine instillations, the treatment was started for a fungus growth which cleared the ear in about one week. No recurrence of fungus or furuncles. Oct. 1, 1928.

*Case 3.* Miss S. seen in my office Dec. 5th, 1927, complaining of a slight discharge in one ear and slight loss of hearing, itching of the ear with pain radiating down the neck. Examination showed fungus growth with a very red, irritated canal. The growth was found around the tympanum, the proximal end of the canal having a scaly appearance as of an eczematous condition being scaly and very red and irritated, caused by the secretion of the fungus. The usual treatment given, patient dismissed January 14th, 1928. No return of condition March 15th, 1928.



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## RESUME OF 600 CASES OF SYPHILIS OBSERVED AT THE FLORIDA STATE HOSPITAL\*

J. C. INMAN, JR., M.D.,

Chattahoochee.

The object of this paper is to present nothing new in the way of treatment of syphilis, but to give you a brief review of the most important drugs used in the treatment of syphilis, and a resume of 600 cases treated at the Florida State Hospital in the past three years.

Among the most popular drugs used in the treatment of syphilis at the present time are neoarsphenamine, sulpharsphenamine, mercury, bismuth, iodides, malaria and tryparsphamide.

That the form of arsphenamine is a matter of individual preference to be used in the treatment of lues is no longer a matter of individual preference among physicians who have charge of the case is considered good therapeutics, has been definitely proven by Rajies, Severac, Moetsch, Corbitt and Meyer. In a paper read before the American Pharmaceutical Association at Asheville, North Carolina, in 1923, they showed a table of experiments conducted by themselves, that sulpharsphenamine was two and one-half times less efficient than neoarsphenamine. If their statements are true, and if the trypanocidal test is an accurate test of the curative power of the arsphenamine, then we must admit that sulpharsphenamine should be substituted by a more efficient drug.

Arsphenamine and neoarsphenamine, according to most observers, have practically the same value, and since they are the most potent drugs we have for syphilis, neoarsphenamine should be the drug employed, because it is easier to give and has less toxic effect than the arsphenamine. Hozen states that sulpharsphenamine proved to be

markedly toxic, having no more effect upon the pathological spinal fluid than has neo, and is not particularly well borne either subcutaneously or intramuscularly, except in small doses.

Mercury is one of the oldest remedies used in the treatment of syphilis. The effect upon the Wassermann reaction is not as rapid as that of the arsphenamine, and on account of this fact, it lost some of its prestige in the early days after the introduction of Ehrlich's remedy. Yet Engleman believes that it has a more permanent effect upon the Wassermann reaction in chronic cases than arsphenamine. Mercury is used on account of its stable, but slow, action as an adjuvant by arsphenamine. Various methods have been used for administration: inunction, subcutaneously, intramuscularly, and intravenously. Inunctions are filthy, and most patients resist them on this account. Intramuscular and subcutaneous injections occasionally form abscesses, and occasionally the muscles are rather sore for a few days afterwards. Given intravenously there is no filth and no reaction following injection. For this reason I believe it to be the best method.

It is impossible to judge at present the position that bismuth will ultimately occupy in the treatment of syphilis. Under its action *sperochæta pallida* disappear rather slowly, as compared with the rapid effect of arsenicals. There seems to be at present some danger in the substitution of bismuth for arsenicals because it does not seem to be as quick in action, or as potent as arsenic. Bismuth seems to have about the same effect on syphilis, experimentally, in rabbits as does mercury, but not quite so potent in the human race.

In certain cases, however, bismuth is definitely indicated. It is not so toxic, can be more readily tolerated in nephritics, cardiacs, aneurysm, and does not cause as ill an effect on tuberculosis as does mercury and arsenicals. About the only contraindication to bismuth is in cases of stomatitis, and these can be controlled with suitable care.

Iodides have one place in the treatment of syphilis, and that is in cases of long standing, where the *sperochæta pallida* is likely to be invested in scar tissue.

Malaria has been reported as curative in paresis by various men, but we have cases of paresis admitted to the hospital having chills with malaria and apparently without any therapeutic result. Malaria, however, does occasionally cause a remission of the symptom, but at the same time

\*Read before the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society, Chattahoochee, October 13, 1927.

any acute injection may cause the same thing. It has been definitely proven that the *sperchoeta pallida* is not killed under a temperature of 106° F. and the average case of paresis with a temperature that high usually dies.

Tryparsphamide has been used a good deal recently with good reports. We have never used it in any of our cases of paresis, due to the complication so frequently reported.

We have been using neoarsphenamine, mercury and iodides in practically all of our cases, giving eight injections each of neoarsphenamine and mercurisol intravenously over a period of eight weeks, one injection of each per week, together with iodide of potash in small doses, the dosage to each patient depending on the physical condition. This is followed by an intermission of three months, when they are checked serologically, both blood and spinal fluid. If still positive, another course is given, providing their condition is such that they are able to take it. This is kept up until they are negative. Six months after the first negative reaction, another Wassermann on both blood and spinal fluid is made, or a check, providing the patient is still in the hospital.

We have obtained the following results:

Number positive blood Wassermann and cerebrospinal fluid Wassermann.....	286
Positive blood Wassermann and negative cerebrospinal fluid Wassermann.....	272
Positive cerebrospinal fluid and negative blood Wassermann .....	27

#### RESULTS OF TREATMENT.

Home on parole before treatment and follow-up work complete .....	46
Negative blood Wassermann and cerebrospinal fluid Wassermann.....	510
No change in blood or cerebrospinal fluid after repeated treatments.....	1
Blood Wassermann negative cerebrospinal fluid still positive after repeated treatments	1
Died before treatment completed .....	42
Discharged and paroled as improved .....	302
Improved mentally and physically, but still in hospital .....	14
Improved physically, but not mentally, still in hospital .....	14
Improved mentally, but not physically, still in hospital .....	10
No improvement either mentally or physically .....	47

Treatment omitted due to physical condition and old age ..... 40

It must be remembered that no definite routine can be outlined for all luetic patients, but that each case must be treated individually.

#### A RECORD OF THE EXAMINATION OF 255 PRE-SCHOOL CHILDREN OF TAMPA\*

W. H. McCASLAN, M.D.,  
Tampa.

It has been suggested that a record of the results of the examination of pre-school children might be of interest to those of us who were concerned in the child, its growth and development. This paper is not intended as a very comprehensive study, as the time and facilities would not permit it. The cases here recorded were seen in the city health clinic of Ybor City, and cover a period from December, 1926, to May, 1927. I might say here that this work in Tampa has been made possible through the efforts of Dr. Levy, the city health officer. In addition to two pre-school clinics, one in Ybor City and one in West Tampa, we have four infant clinics and two prenatal clinics per week. The cases seen in these clinics are, in the main, children who were not ill, but brought to the clinic for routine examination. It is very rare that we see an acutely ill child in the clinic. Practically all of the cases are of the lower classes, and members of the Latin races predominate. This latter fact should be borne in mind, as the average weight and height curve we have used is that of Holt for American children; whereas the weight and height of children of the Latin races is considerably lower. Therefore, the percentage of undernourishment, as here recorded, is higher than it should be. We have arbitrarily put those cases that were two pounds or more and two inches or more under the average of Holt in the underweight and underheight columns. Robertson, in Abt's Pediatrics, Vol. I, says that data concerning the juvenile growth cycle (2-9 years) is extremely scanty, and for this reason we are somewhat hampered in our comparisons and statistics.

As complete an examination as possible is made of each child seen. If any corrections are deemed advisable the cases are referred to specialists in that line. Our results in getting the parents to cooperate in this respect have been

\*Read before the Hillsboro County Medical Society, June 7, 1927.

very encouraging in many cases and very disappointing in some. Besides the routine physical examination, each child is examined for animal parasites. If these are found, regular treatment is instituted. The results in this one line have been most satisfactory.

In addition to the examination, the parents are instructed as to diet, hygiene, etc. They are given pamphlets, printed in English, Spanish and Italian, instructing them along these lines. Every case is visited in the home by a city nurse at regular intervals. I feel that too much praise cannot be given these nurses for the work they have accomplished, often under very adverse circumstances. Our efforts to correct errors in diet and hygiene have been largely successful on account of their untiring work. It has been rather hard to persuade these Latin mothers to have their children vaccinated and given toxin-antitoxin for diphtheria and typhoid prophylactic treatment. But they are gradually falling in line, and of late we have had more and more at each clinic to receive these treatments.

Some of the cases have been seen but once, many of them two or three times, and a goodly number of them come regularly every two to four weeks. It is in these latter cases that we feel the most good has been accomplished.

For the height and weight estimates the cases have been divided into yearly groups from two to six years of age. For all other statistics they are grouped as a whole.

#### Normal:

	2-3 yrs.	3-4 yrs.	4-5 yrs.	5-6 yrs.
Weight	74% (38)	56% (33)	52% (32)	73% (61)
Height	74% (38)	62% (37)	56% (34)	88% (74)

#### Under Normal:

Weight	26% (13)	44% (26)	48% (29)	27% (23)
Height	26% (13)	38% (22)	44% (27)	12% (10)

Total ..... 51                      59                      61                      84

Enlarged tonsils	38% (89)
Diseased tonsils	20% (52)
Bad teeth	20% (52)
Eye defects	1% (3 )
Enlarged bronchial glands	.4% (1 )
Asthma	.4% (1 )
Bronchitis	2.4% (6 )
Heart murmurs	1.9% (5 )
Umbilical hernia	.4% (1 )
Inguinal hernia	1.5% (4 )
Thyroid deficiency	.4% (1 )

#### SKIN DISEASES:

Impetigo	3% (8 )
Scabies	5.5% (14)
Ringworm	.4% (1 )
Eczema	.8% (2 )
Alopecia	.4% (1 )

#### ANIMAL PARASITES:

Ascaris	8% (20)
Trichiuris	3% (8 )
Hookworm	.8% (2 )
Poliomyelitis	1.2% (3 )
Mongolian Idiot	.4% (1 )
Spinal Curvature	.4% (1 )
Spina Bifida	.4% (1 )
Cretin	.4% (1 )
Spastic Diplegia	.4% (1 )
Rickets	.4% (9 )
Hydrocephalus	1% (3 )
Bronchial Fistula	.4% (1 )
Lipoma	.4% (1 )
Macromelia of Lip	.4% (1 )

All of the cases with bad tonsils are advised to have them removed, and in about 15% of the number this has been done. Those with bad teeth are referred to their own dentist or sent to the city hall, where the work is done for a very nominal fee. All cases with eye defects are now under the care of eye specialists. The skin diseases have responded promptly to treatment. In some of those having animal parasites, several courses of treatment have had to be resorted to before getting negative reports. The one case of Spina Bifida, which is located in the upper lumbar region, also presents a hydrocephalus and is rapidly failing. Several orthopedic cases have received treatment.

Two cases of hydrocephalus are of interest in that in four generations seven cases have presented themselves. All occurred in males with one exception, the grandmother of one of the present cases. Wassermann tests were negative on these cases and their mothers. Both of these children are mentally below par. Both appear stupid, but are irritable when aroused. There is apparently no interference with sight or hearing. No muscular rigidity is apparent. The deep reflexes are slightly exaggerated. There is no history of convulsions. Lateral nystagmus is present in both cases. The nutrition is poor. Both have very much enlarged tonsils and adenoids and several carious teeth. The anterior fontanels are open. X-ray pictures of the skulls show a wide sella turcica with thinning of the bones of the vault of the cranium. Since these children have been under observation the course has been progressively downward.

A review of the records of this clinic for the first five months convinces us that there is a real need for such a clinic, and that the results amply justify the time and labor expended.



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## STATE DUES

It is hoped that every member of the Florida Medical Association will pay his dues before the annual meeting which is to be held April 2nd and 3rd at St. Augustine. The secretaries of the county medical societies are urged to collect and forward state dues just as promptly as possible. Rosters have been mailed to all secretaries from the business office, giving a complete record of 1928 membership. More than 1,000 members have paid their 1928 dues and in this way contributed to the support of the Journal and the Association. A Journal such as the one you are receiving cannot be printed without considerable outlay. You are, therefore, urged to pay your 1929 dues promptly in order that you may personally contribute to the organization representing your profession, not only in your own state but also nationally.

## CAPITAL INVESTMENT IN MEDICINE

A very important group, composed of economists, publicists, physicians and others, has undertaken to make an investigation of the cost of

medical care, the results of which will be of great importance to the medical profession. The American Medical Association has undertaken to collect information pertaining to the capital investment in medicine and the income from medical practice.

As a part of the work of the above-mentioned group, known as The Committee on the Cost of Medical Care, the American Medical Association is to request more than 25,000 physicians, selected at random, to furnish certain data pertaining to the invested capital involved in physicians' education, intern training, post-graduate courses, office and traveling equipment, office maintenance, medical society affiliations, library maintenance and medical licensure fees.

This is a survey of the profession, by the profession, and for the benefit of the profession. The questionnaire is to be anonymous and, therefore, there need be no fear of any embarrassing or undesirable results from the information returned.

Our membership is urged to give this matter serious and thoughtful consideration to the end that complete and reliable data will be given on the several items. The importance of this survey and the desirability of universal participation on the part of the physicians who receive the questionnaire cannot be overestimated.

---

#### STATE NEWS ITEMS

The Pasco-Hernando-Citrus County Medical Society met in Dade City December 13th, with T. F. Jackson as host. Dinner was served at the Osceola Hotel, followed by the scientific meeting in Dr. Jackson's office. The annual election of officers was held, which resulted as follows: T. F. Jackson, Dade City, president; Geo. A. Dame, Inverness, vice-president; Wm. Hancock, Jr., Brooksville, vice-president; George R. Creekmore, Brooksville, secretary-treasurer. George G. McGregor was elected as delegate to the next meeting of the Florida Medical Association, with W. P. Moon as alternate. The following doctors were elected to the Board of Censors: J. T. Bradshaw for Pasco County; L. T. Furlow, Hernando County, and J. P. Hudson for Citrus County.

\* \* \*

The January meeting of the Duval County Medical Society was held Wednesday, the 2nd, 8 p. m., at the new Jacksonville Chamber of Commerce. The program was especially good and the

attendance double that of any previous meeting during the past two years. Dr. J. Knox Simpson read an interesting paper on "Some Pitfalls in Abdominal Diagnosis With a Report of Cases." The discussion was opened by Drs. J. Gammon and T. S. Fields. The Society was fortunate in having as guest of the evening, Mr. Ben Burbridge, a noted hunter and explorer, who gave a talk on "The Medical Aspects of Big Game Hunting."

\* \* \*

Following an illness of several years, Mrs. Emma Arnold Richardson, mother of Dr. Shaler Richardson of Jacksonville, died at her son's home, 1834 Talbot Avenue, Friday morning, January 11th. She was in her 79th year and had been a resident of Jacksonville since 1921. Her husband, the late Dr. Clement Lanier Richardson, died in December, 1926. She and her husband moved to Jacksonville to live with their son in 1921 from Lake Charles, Louisiana, where the late Dr. Richardson had been practicing his profession over forty years.

\* \* \*

At the December meeting of the Seminole County Medical Society, the following officers were elected to serve for 1929: C. M. Mitchell, Sanford, president; T. W. Langley, Sanford, vice-president; J. T. Denton, Sanford, secretary-treasurer. J. T. Denton was elected as delegate to the next annual meeting of the Florida Medical Association, with G. S. Selman, alternate.

\* \* \*

Dr. J. B. Parramore, Jacksonville, while in St. Louis recently, attended the meeting of the American Academy of Ophthalmology and Otolaryngology. He successfully passed the examination of the American Board of Otolaryngology.

\* \* \*

At a recent meeting of the Lake County Medical Society, the following officers were elected for the ensuing year: S. C. Colley, Tavares, president; W. J. Calvin, Eustis, vice-president; W. L. Ashton, Umatilla, secretary-treasurer. S. C. Colley was elected delegate to the state meeting, with C. M. Tyre as alternate. C. McK. Tyre, of Eustis, read a paper on "Syphilis in the New Born, Infant and Child".

\* \* \*

Dr. J. D. Stuart announces he is resuming the practice of medicine, with offices at 127 N. E. 5th St., Miami.

The following officers were elected at the December meeting of the DeSoto-Hardee-Highlands County Medical Society to serve for the ensuing year: A. A. Poucher, Wauchula, president; H. P. Bevis, Arcadia, vice-president; M. A. Hubert, Sebring, secretary and treasurer. W. C. Blake and R. P. Henderson, of Tampa, were guests of the Society. Dr. Blake presented a paper on "Bronchial Spirochetosis".

\* \* \*

Dr. Maurice E. Heck, DeLand, councilor for the Seventh District, announces that he has associated himself with Dr. Samuel Aronovitz, with offices in the Professional Building, Miami. Special attention will be given to diagnosis and surgery.

\* \* \*

At a recent meeting of the Hillsboro County Medical Society, the following officers were elected to serve for the ensuing year: C. R. Marney, president; A. M. Bidwell, vice-president; Frank T. Barker, secretary and treasurer. The following doctors were elected to serve as delegates to the next annual meeting of the Association: N. L. Spengler, D. D. Martin, L. J. Efrid, E. H. McRae, L. B. Mitchell and C. G. Batori. J. M. Grantham, A. C. Ives and Cecil Vaughn were elected to the Board of Censors.

\* \* \*

The following papers were presented at the scientific session of the Pinellas County Medical Society during the month of November:

The Use of Carbon-dioxide Snow in the Treatment of Rectal Malignancy, Jack Halton, Sarasota (by invitation).

The Common Medical and Surgical Diseases of the Rectum, G. Timberlake, St. Petersburg.

Recent Progress in Pediatrics, A. M. Bieker, St. Petersburg.

Observations on the Treatment of Chronic Tuberculosis, E. B. MacCordy, St. Petersburg.

Case Reports:

Pneumococcus Meningitis, H. W. Wade, St. Petersburg.

Unusual Case of Abdominal Pain, L. A. Wylie, St. Petersburg.

Impacted Ureteral Stone, A. L. Mills, St. Petersburg.

Spirochetosis, R. H. Knowlton, St. Petersburg.

Spore Infection of the Lung, N. M. Marr, St. Petersburg.

An Apical Lung Tumor, F. S. Jennings, St. Petersburg.

The following resolutions have been prepared by a committee appointed from the class at the 1928 session of the Southern Pediatric Seminar:

WHEREAS, we, the class of 1928 of the Southern Pediatric Seminar, realize the great sacrifice and earnest effort of the faculty in providing this opportunity for the general practitioner to become more efficient in the care and treatment of infants and children, so that the health of our babies in the South may be greatly improved, and

WHEREAS, we fully appreciate such sacrifice and effort in our behalf;

And we realizing that the Southern Pediatric Seminar is unique in that it is a pioneer effort in providing a concise intensive course in Pediatrics, which can not be had elsewhere in the U. S. A.;

That the faculty is composed of men of high caliber and unsurpassed teaching ability;

That the course is so arranged as to make it of inestimable value, not only to the general practitioner, but to the pediatrician as well;

That the lectures are amply illustrated and strongly impressed by a wealth of clinical material;

That the absence of commercialism is a wholesome influence, and that one of the outstanding features of the Seminar is good fellowship that exists between faculty and student body;

*Therefore, be it resolved*, that we in this manner give expression of our sincere appreciation of the Seminar with all of its helpful and inspiring phases, and that a copy of these resolutions be furnished to all members of the faculty, and published in the Southern Medical Journals.

COMMITTEE: W. E. Simmons, Chairman, Metter, Ga.; C. H. Farmer, Lakeland, Fla.; W. E. Sherman, Winter Haven, Fla.

\* \* \*

The regular meeting of the Suwannee River Medical Association was held in Madison, Friday evening, December 21, 1928. The business side of the practice of medicine was generally discussed and better methods along these lines were pointed out. The following officers were elected for the ensuing year: L. J. Arnold, Lake City, president; R. E. Dicks, Dowling Park, first vice-president; G. H. Warren, Perry, second vice-president; D. H. Yates, Madison, third vice-president; J. R. Bruce, Jasper, fourth vice-president, and T. H. Bates, Lake City, secretary and treasurer.



Mrs. Frederick J. Waas and Mrs. Herrman Harris, Jacksonville, made an official visit to St. Augustine recently in connection with the Ladies' Auxiliary of the St. Johns County Medical Society.

\* \* \*

Friends of Dr. G. H. Edwards of Orlando will be pleased to learn that he is convalescing from the operation which he underwent recently at the Orange General Hospital.

\* \* \*

The following officers were elected at the December meeting of the Palm Beach County Medical Society: F. K. Herpel, president; O. F. Schiffli, vice-president; R. G. Lewis, secretary, and L. J. Netto, treasurer. J. A. Powell was re-elected as a member of the Board of Censors.

\* \* \*

Dr. J. J. McGuire of DeFuniak Springs returned recently from a two-weeks visit to New Orleans.

\* \* \*

At the December meeting of the Columbia County Medical Society, the following officers were elected to serve for 1929: Herbert Caldwell, president; J. D. Gable, vice-president, and T. W. Witt, secretary-treasurer. Future meetings of the Columbia County Medical Society will be held at the Blanche Hotel instead of the Chamber of Commerce building.

\* \* \*

Mr. and Mrs. Joseph D. Holland of Nashville, Ga., announce the marriage of their daughter, Jolda, to Dr. Homer L. Pearson of Miami, on Monday, November 19th.

\* \* \*

The annual election of officers of the Dade County Medical Society was held Friday, December 7th. The following doctors were elected to serve during 1929: C. D. Cleghorn, president; Roy J. Holmes, vice-president; Robert M. Harris, secretary, and C. E. Dunaway, treasurer. Walter C. Jones, John W. Snyder and H. C. Babcock were elected to the Board of Censors.

\* \* \*

Dr. J. C. Nowling, formerly of Ft. Myers, announces his removal to Clewiston, Ga.

Dr. A. G. Williams, secretary of the Walton-Okaloosa County Medical Society, returned recently from a hunting trip to Sopchoppy and vicinity.

\* \* \*

Dr. C. D. Christ of Orlando was elected president of the Seaboard Air Line Railway Surgeons' Association at the annual meeting of that body held at Orlando in December. Baltimore was selected as the 1929 convention city.

\* \* \*

Dr. T. J. Carradine of Lawtey has been appointed as Moosehaven's new physician, succeeding Dr. Remer Young Lane who died recently. The Moosehaven home is located in Orange Park.

\* \* \*

The Putnam County Medical Society completed its first year since organization with a very successful meeting at the James Hotel, Palatka, on the evening of December 13th. This Society, though small in numbers, has shown an unusually good percentage for attendance. At this meeting there were 90% of the members present.

The meeting was presided over by Dr. J. T. Hosey, president, with the scientific program being supplied by a group from the Duval County Medical Society who had motored down from Jacksonville as guests of the Society. Dr. W. M. Shaw gave a talk on the early history of Professor Röntgen and the discovery of the X-ray, illustrated by slides of Professor Röntgen's laboratory. This was followed by a talk by Dr. J. K. Simpson on "Surgery of the Biliary Tract."

Dr. H. M. Taylor read a paper illustrated by slides entitled "The Electro Cautery in the Treatment of Laryngeal Tuberculosis." Dr. Edward Jelks read a paper on "Some Observations on Intestinal Obstruction." This was also illustrated by slides.

Those attending the meeting were: H. A. Johnson, W. S. Miller, G. M. Zeigler, J. T. Hosey, A. M. Steen, E. W. Warren, Palatka; J. Brantley, Grandin; E. W. Ford, Crescent City; D. S. Main, Pomona; and Lydia Woerner, Interlachen.

From Jacksonville, H. M. Taylor, Edw. W. Jelks, L. W. Holloway, E. T. Sellers, J. A. Beals, J. K. Simpson, and W. M. Shaw were in attendance.

At the regular meeting of the Lee County Medical Society, the following officers were elected for the year 1929: Guy A. Longbrake, president; George S. Stone, vice-president; H. Quillian Jones, secretary-treasurer. A. P. Hunter was elected delegate.

\* \* \*

Dr. E. P. Webb, Crestview, and Mrs. Julia B. Walker of Montgomery, Alabama, were recently married.

\* \* \*

The following resolutions were passed at a recent meeting of the Columbia County Medical Society:

WHEREAS, on July twenty-seventh, One Thousand Nine Hundred and Twenty-eight, the Columbia County Medical Society lost one of its members, Dr. I. A. Black.

WHEREAS, Dr. Black was a very active and progressive member of the profession and charitable to the poor.

WHEREAS, his presence will be sadly missed by his associates and fellow members of this Society.

*Be it resolved* that the members of Columbia County Medical Society express their grief in the loss of Dr. Black and sympathy for his family, and that a copy of these resolutions be spread on the minutes of this Society, one sent to the bereaved family and one to the Journal of the Florida Medical Association.

Signed by the Committee October 1st, 1928.

L. M. ANDERSON, M.D.

J. H. DYER, M.D.

J. D. GABLE, M.D.

\* \* \*

The Volusia County Medical Society recently held its annual meeting and dinner at the Halifax District Hospital. The following officers were elected: J. B. Davis, Daytona Beach, president; R. L. Miller, Daytona Beach, vice-president; J. Ralston Wells, Daytona Beach, secretary-treasurer.

\* \* \*

Dr. J. W. Hodges, a member of the Duval County Medical Society, who has been located at Birmingham, Alabama, has recently removed to Richmond, Virginia.

\* \* \*

The Polk County Medical Society held its regular election of officers recently which resulted as follows: G. H. Carefoot, Ft. Meade, president; S. F. Smith, Lakeland, vice-president; Herman Watson, Lakeland, secretary-treasurer.

(Continued on page 358)



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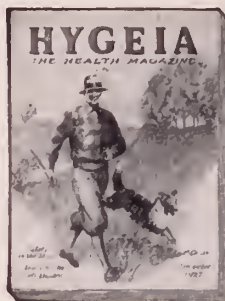
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## NOTICE!

# Fifty-Sixth Annual Meeting

*of the*

# Florida Medical Association

*will be held at*

SAINT AUGUSTINE  
April 2nd and 3rd, 1929

County Society	Secretary	Date	Time	Place	Luncheon?	Paid.
Alachua .....	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	
Bay .....	D. M. Adams, M.D., Panama City.					
Bradford .....	Seeber King, M.D., Lake Butler.					
Brevard .....	I. K. Hicks, M.D., Melbourne.	Varies		Varies		
Broward .....	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	
Columbia.....	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		
Dade .....	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	
DeSoto-Hardee- Highlands ...	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	
Duval .....	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Duval County Hospital	No.	
Escambia .....	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	
Hamilton .....	R. A. Barnett, M.D., White Springs.					
Hillsboro .....	Frank T. Barker, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	City Hall	No.	
Jackson .....	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake .....	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes.	
Lee .....	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	
Leon-Gadsden- Liberty- Wakulla- Jefferson .....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison .....	Geo. O. Davis, M.D., Madison.					71%
Manatee .....	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion .....	J. L. Chalker, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	
Monroe .....	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange .....	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Tuesday	8:00 P.M.	Varies	Yes. .	
Pinellas .....	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Y. M. C. A. Bldg.	No.	
Polk .....	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam .....	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	
St. Johns .....	J. M. Irwin M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeecho- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.					
Sarasota .....	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole .....	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		
Sumter .....	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee ....	W. C. White, M.D., Live Oak.					
Taylor .....	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia .....	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	
Walton- Okaloosa ....	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	
*Washington- Holmes .....	W. C. Harper, M.D., Chipley.					



The Women's Auxiliary of the Volusia County Medical Society held its December meeting at the Morgan Hotel, Daytona Beach.

\* \* \*

Do you expect to read a paper at the Fifty-sixth Annual Meeting of the Florida Medical Association at St. Augustine in April? There is a time limit on applications. Every member of the Association has received a personal letter from Dr. G. H. Edwards, chairman of the Scientific Programme Committee, soliciting applications for places on the scientific program. Editorials and news items have appeared in your Journal from time to time, calling attention to this important matter. The entire program must be ready for publication in the March Journal. Please note editorial on page 161 of the September, 1928, Journal.

\* \* \*

Dr. B. L. Arms, State Health Officer, Jacksonville, recently addressed the St. Petersburg Civitan Club. He commented on health conditions in Florida and was honored by the medical profession in that there were thirteen physicians in attendance at this particular club luncheon.

\* \* \*

At the regular meeting of the Alachua County Medical Society recently held at the Hotel Thomas, the following officers were elected for the ensuing year: J. Lee Summerlin, Gainesville, president; J. M. Willis, Williston, first vice-president; Wilburn Lassiter, second vice-president; J. E. Maines, Jr., Gainesville, secretary-treasurer. J. M. Dell was elected as delegate to the annual meeting of the Association with Byron T. King, alternate. S. D. Rice was elected censor. At this meeting John E. Maines, Jr., presented a paper on "Blood Pressure and Hypertension."

\* \* \*

At the annual election of officers of the Escambia County Medical Society, the following were chosen to serve for the ensuing year: A. M. Lischkoff, Pensacola, president; J. M. Hoffman, Pensacola, vice-president, and J. D. Bell, Pensacola, secretary-treasurer.

\* \* \*

It was doctors' day at the Timuquana Country Club, Jacksonville, recently, although honoring the medical profession was not premeditated in the Christmas turkey blind bogie. Dr. C. R. Wilcox won the toss after tying with a 72. Dr. Knox Simpson came in second and Dr. Edward Jelks third. The last prize was won by a layman.



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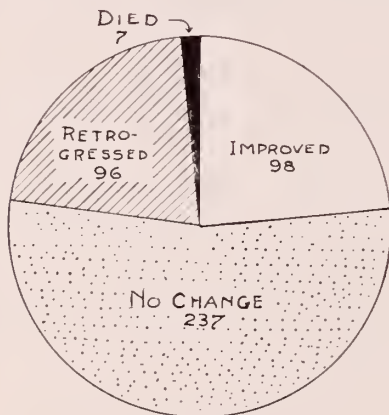


ORGANIZATION

## TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS  
ISSUED MONTHLY BY THE NATIONAL  
TUBERCULOSIS ASSOCIATION

The patient who is rushed to the operating table with a dangerous appendicitis soon recovers and shortly returns to his accustomed routine more fit than before. The patient who has spent eighteen or more months in a tuberculosis sanatorium, when at last discharged as an "arrested case" learns that, for him, the day of discharge is "commencement day." In the face of pent-up energies, he must learn to reorganize his life or, at any rate, to curb enthusiasms to which he had previously been accustomed. He must realize that a sword of Damocles still hangs over his head. After-care of the arrested case of tuberculosis has long challenged the thought of the clinician and the sociologist. Two important reports, one from London, the other from New York City, recently issued on this subject, indicate that the problem is by no means solved.



Progress of 431 tuberculosis patients under Vocational Service of New York Tuberculosis and Health Association between initial and final examination. Based on extent of lesion and clinical symptoms.

#### EMPLOYMENT OF TUBERCULOSIS PATIENTS IN ENGLAND

Conditions responsible for unemployment among the able-bodied members of a population are still more acutely reflected among the tuberculous workers. Fortunately, "it is a general ex-

(Continued on page 362)



## THE CODFISH REGION

Dotted along the shore line from Cape Cod up to Labrador are the Patch plants, where the fishermen bring in their daily catch of codfish, and the oil is obtained by promptly cooking the fresh livers.

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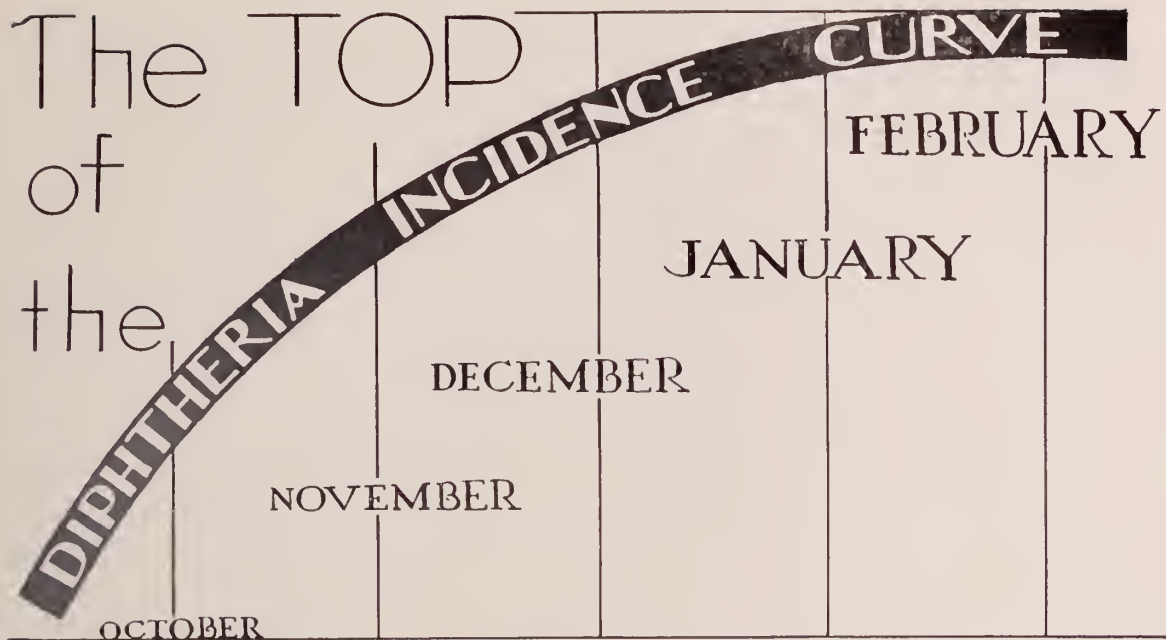
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perience that, whether trade conditions be good or bad, the consumptive worker who leaves his job to undergo treatment, returns to it if he makes a good recovery." The working capacity of the chronic case of tuberculosis is seldom more than 50 per cent of that of a normal worker and his labor is more unreliable because steady work cannot be maintained by him.

The advice to secure work in the open air, often arduous and exposed to all weather, is usually fallacious. An occupation that is free from worry and provides a good wage is far better. The best occupation for a tuberculous person is the one to which he is accustomed and at which he can earn a good income, provided it can be carried out under reasonably hygienic conditions.

Case Committees have endeavored to fit arrested cases for employment and to secure positions for them. Their task has been difficult, involving not only the training and placement of ex-patients but also the persuasion of the employer and fellow employees that no danger is incurred in employing an arrested case of tuberculosis. Precise conditions of employment of tuberculous persons can not be laid down as their capacity varies greatly. Light work in parks and gardens has been found most suitable. Absences from work of a month or more are not uncommon. In Leeds, there is a "Shop-in-the-Fields," equipped to cut firewood, to do general house repairs and to make brushes. Workers are also sent out on call to clean windows. During the first two years, the enterprise was run at a loss but a small profit was made in the third year. In the Spero workshops in London, fancy leather goods were manufactured. Difficulty was met in marketing the product and it has been necessary to subsidize the venture. From the standpoint of improving the health and morale of the workers, this experiment has, however, been a decided success. Many other experiments of a similar nature are also described.—*Employment of Tuberculous Patients, Report by the Medical Officer of Health (London), January, 1928.*

#### EMPLOYMENT OF THE TUBERCULOUS IN NEW YORK

The New York Tuberculosis and Health Association in 1923 undertook a three-year experiment in supervising the employment and medical follow-up of quiescent and arrested cases of tuberculosis. The Reco Shop, a training school for  
(Continued on page 364)

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tuberculous ex-service men, conducted in co-operation with the Federal Government, offered training in jewelry making, watch repair and cabinet work but was finally, for good reasons, abandoned. The Altro Shop, a model garment factory for the tuberculous, while limited in scope, has been very successful and serves a very useful purpose.

Some conclusions, based on a careful analysis of cases, medical, social and economic, are that, while the group is largely composed of poorly paid and untrained workers, it is surprisingly self-supporting. Eighty-two per cent earned a fairly good employment record. Excluding the cases diagnosed as non-tuberculous, 40 per cent were classed as incipient, 50 per cent as second stage and 10 per cent as far advanced. Medical studies made of 431 workers at the time of employment and again on discharge, based on the area of the lesion, showed that in 346 the diagnosis remained the same, in 28 the lesion decreased and in 57 it increased. A similar tabulation, based on "condition," showed 279 unchanged, 86 improved and 66 worse.

A summary of the conclusions is as follows:

Indications are that a medically supervised vocational and employment service for tuberculous ex-patients will aid materially in carrying through a recovery already started and will help to reduce the relapse rate.

Such a service may be run more economically in connection with similar service for other types of handicapped persons and will suffer no loss from such combination provided it be given expert supervision by physicians familiar with tuberculosis.

To be effective, such a service should have the benefit of family case work service, either within the organization or through close cooperation with family agencies.

For the large majority of patients who are unable to return immediately to full-time work, some special provision in part-time shops should be made.

Industrial training in skilled trades for the tuberculous has not proven possible from the vocational point of view for psychological and economic reasons. The problem of inducing the patient to take suitable work could be greatly facilitated by adequate and continuous vocational counselling in the sanatorium.

(Continued on page 366)



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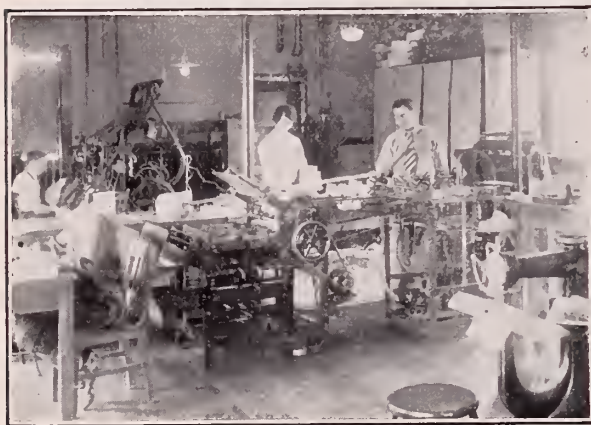
1201 South Olive  
 WEST PALM BEACH, FLA.

It is not feasible to list trades and jobs which are suitable for the tuberculous but rather to list the factors to be avoided and sought in selecting work for them.—*Employment of the Tuberculous, Alice Campbell Klein and Grant Thorburn, M. D., New York Tuberculosis and Health Association, 1928.*

#### GRADING THE WORK CAPACITY OF TUBERCULOUS PATIENTS

Godias J. Drolet, in cooperation with the Committee on After-Care and Social Re-establishment of the National Tuberculosis Association, has proposed a classification of the work capacity of tuberculosis patients, based on the condition and stage of the disease, previous work, history, working conditions and other factors, all of which have been carefully defined.

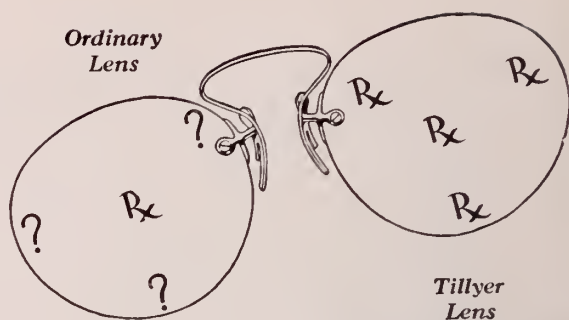
Definitions and classification are printed on a card convenient for reference. Copies may be obtained from the state tuberculosis association or the National Tuberculosis Association.



Print Shop at Potts Memorial Hospital

This sheet is published in the print shop of Potts Memorial Hospital, Livingston, New York, an institution established for the purpose of providing a "hardening period" for patients who have been discharged from tuberculosis sanatoria as arrested cases. The purpose is not to give vocational training but merely to re-establish the working capacity of favorable cases. Gardening, poultry raising, landscaping and a commercial print shop provide the chief means of employment. The workers are under competent medical supervision and the amount of work which they are to do is each day carefully charted on an hourly basis.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)



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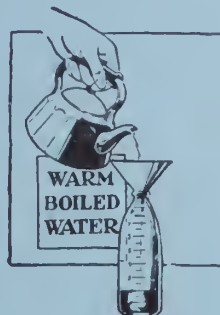


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Tablets Digitalis (Whole Leaf) Lederle are supplied in three sizes: 2 Cat Units (3 grains); 1 Cat Unit ( $1\frac{1}{2}$  grains); and  $\frac{1}{2}$  Cat Unit ( $\frac{3}{4}$  grain).

\*Gold & De Graff, Jour. A. M. A., March 31, 1928.

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### CONTENTS

	PAGE		PAGE
Pyelitis of Pregnancy . . . . .	385	Tuberculosis of the Kidney . . . . .	398
<i>Roy J. Holmes, M.D., and Milton M. Coplan, M.D., Miami.</i>		<i>F. E. Davis, M.D., Chattahoochee.</i>	
Some Phases of Ophthalmology That Concern the General Practitioner . . . . .	388	The Role and Rationale of Oral Focal Infection . . . . .	401
<i>Shaler Richardson, M.D., F.A.C.S., Jacksonville.</i>		<i>C. J. Caraballo, D.D.S., Tampa</i>	
Modern Diagnosis of Diseases of the Urinary Tract . . . . .	392	Editorial: Technical Exhibit . . . . .	403
<i>J. U. Reaves, M.D., Mobile, Ala.</i>		Membership Roster Florida Medical Association, Inc. 1928 . . . . .	406-411
Remarks on Cancer—With Case Report of Colloid Cancer of Transverse Colon . . . . .	396	State News Items . . . . .	412-414
<i>A. D. Little, M.D., F.A.C.S., Thomasville, Ga.</i>		Schedule of Meetings—Component Societies . . . . .	415
		Tuberculosis Abstracts—A Review for Physicians Issued Monthly by the National Tuberculosis Association . . . . .	416-422

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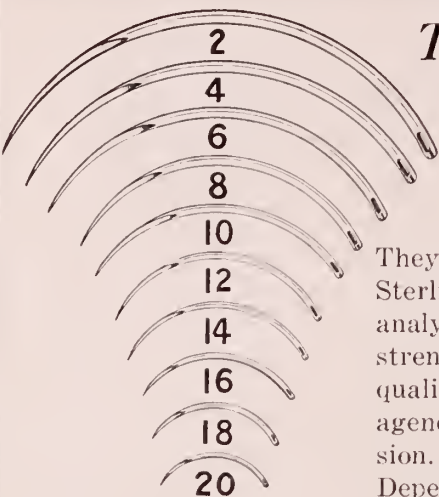
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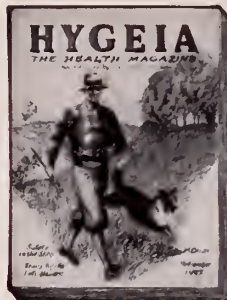
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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

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## "PYELITIS OF PREGNANCY"

ROY J. HOLMES, M.D.,

and

MILTON M. COPLAN, M.D.,

Miami.

In considering mechanical compression of the ureters, such as might be exerted by the enlarging uterus of pregnancy, as a possible etiological factor in the production of pyelitis, one immediately confronts a tremendous barrier in the statement of De Lee to the effect that the normal pregnant uterus never exerts pressure upon the ureters. To quote this authority, "The old notion that the gravid uterus presses on the ureters seems to still possess the minds of many. The specific gravity of the gravid uterus is no greater than that of the intestinal mass and less than that of many tumors which fill the lower abdomen."

With due respect for the views of this great authority, we are positive that in our observations of the bladder mucosa and catheterizations of the ureters in pregnant women we have experienced far more interference from the pregnant uterus than from the intestinal mass. To our minds it is conceivable that any extra-vesicular mass capable of so distorting the cystoscopic picture as to necessitate at times the Trendelenburg or knee chest positions before the ureteral orifices can be seen, is also capable of exerting some slight pressure at the pelvic brim where the right ureter lies in intimate relationship with the pregnant uterus.

It will be remembered that the uterus during pregnancy is obliquely placed in the abdominal cavity with the fundus inclined to the right and rotated around its long axis so that the left border looks to the left and forward, the right border to the right and backward, thereby bringing the right border in close contact with the posterior part of the pelvic brim. Corresponding to the torsion of the uterus about its verticle axis, Williams claims that the bladder is pushed to the right side of the abdomen in possibly 90 per cent of all pregnant women.

The only explanation that we can offer for the fact that 85 per cent of all cases of pyelitis of pregnancy, if unilateral, effect the right side, is that the pregnant uterus actually exerts pressure

upon the ureter at this point. That such pressure does not have to be great in order to produce pelvic stasis is well illustrated by the experiments of Halbertsma, who found that a pressure of 5 grams cannot be overcome by a column of urine 40 centimeters long. Englemann and Bouvin have also shown experimentally that a pressure of 5 m.m. mercury upon an 8 m.m. length of ureter is sufficient to arrest the urine in the ureter under a pressure up to 400 m.m. mercury.

One of us was fully converted to the older school of thought by the excellent pyelograms made by Stevens several years ago and reported in the Journal of the American Medical Association. Some of these pyelograms showed extreme dilatation beginning exactly at the pelvic brim and at a point where the foetal head was in closest apposition to the right ureter. Such dilatation of the ureter was partly, if not entirely, relieved soon after delivery.

Olshausen found dilatation of the ureter in 25 cases out of 34 women in normal pregnancy, bilateral 13, right 10, left 2. Stradfield reported nine instances of dilatation of the ureters and kidney pelves in 12 autopsies in pregnant women. In seven cases of pyelitis during pregnancy Hodges found the right ureter and pelvis dilated in each case. In a pyelographic study of 19 cases of normal pregnancy, Kretschmer and Heaney found bilateral dilatation in nine cases and unilateral in seven cases. These observers also found in eleven cases of acute pyelitis of pregnancy, dilatation of the ureters and kidney pelves in every instance.

It is interesting to note here that as a result of Kretschmer and Heaney's series, many attempts were made to attribute the dilatation, which was so evident in their cases, to kinks, dislocations of the ureter, twists of the ureter, movable kidneys, and other causes. These men promptly countered, with the suggestion that the dilatation was the direct cause of these abnormalities and not the result thereof. The kinks and twists promptly disappeared after delivery.

Within the past few months, Carson of the University of Maryland gives an excellent and detailed report of 21 cases of pregnancy com-

ing to autopsy at the University hospital. This observer found that the average capacity of the right ureter, pelvis, and calyces in these cases was almost double the capacity on the left side. The ureters were studied as soon as the peritoneal cavity was opened. Quoting Carson, "In each case the uterus was seen to be resting upon the right ureter, and from this point up to the kidney a definite dilatation was observed. When the uterus was brought forward the pelvic portion of the ureter was seen to be *flattened out*. In several instances the pelvic portion of the ureter became distended with urine as soon as the uterus was brought forward."

Carson's mind is undoubtedly possessed with the idea that the pregnant uterus can and does "press" upon the right ureter, and that such pressure is not to be considered lightly.

Regardless of what one's views might be; whether his etiological viewpoint be inclined toward the theory of the hypotonic bladder, as suggested by Young, the ureteral strictures of Hunner, or the dislocated ureter of De Lee, the fact remains and is agreed upon by all schools, that in fully 80 per cent of all pregnancies, normal and otherwise, the ureters are dilated and the pelvic urine is in a condition of partial stasis. Caulk tells us that "urinary stasis is not only the most important feature in the production of pyelitis of pregnancy, but in the perpetuation of practically every other type of renal infection."

It is a well-known fact that urine in a condition of stasis is very likely to become infected. Just how it becomes infected is a much-disputed and, as yet, an unanswered urological problem. The older school, including Beidl, Lamierre, Abrami, Mayer, and Heyn, concluded that a healthy kidney may eliminate bacteria, and that such infection represented simply "filth in a stagnant pool." Opposed to this view was the excellent work of Pernice, Sherrington, Dyke, and Helmholtz, which was so convincing that urologists generally have adopted the view that bacteria are not excreted through a kidney unless the integrity of the secreting surface has been broken. Quite recently, however, a number of cases of pulmonary tuberculosis have been reported with tubercle bacilli in the urine without demonstrable tuberculous lesions of the urinary tract. Fulkerson reported two such cases. Noyes reported one within the past month. In the 1925 edition of Osler it is stated that "tubercle bacilli may be present in the urine without any disease of the kidney."

Regardless of the fact that the question of whether or not colon bacilli may be excreted by a normal kidney under the influence of pregnancy is naturally aroused in our minds, we are inclined to believe that the excellent work of Posner, Lewin, and Franke, offers the most likely explanation. These men have shown that bacteria enter the lymph channels directly from the intestines, and that there exists demonstrable lymph channels leading directly from the ascending colon and appendix to the right kidney and its pelvis. Since extreme constipation is so common during pregnancy, it would seem that this would explain the preponderance of right-sided pyelitis. It, however, does not explain why the capacity of the right ureter, pelvis, and calyces is almost double the capacity of the left in normal pregnancies.

Further evidence in support of the pressure theory lies in the fact that pyelitis is not uncommonly seen as a complication of pelvic tumors. Livermore recently reported a case of severe pyelitis complicating a moderate size fibroid of the uterus, the pyelitis being entirely relieved after operation. We have recently seen a case of this type in which the fibroid was about the size of the five-months pregnant uterus. The complicating pyelitis was unusually severe and was confined to the right side. The right ureter and kidney pelvis were markedly dilated. This case recovered after hysterectomy, and we have since had occasion to note that the capacity of the ureter and pelvis has returned to normal.

Before considering the treatment of this condition, we will briefly summarize a case of typical pyelitis of pregnancy which came under our observation quite recently.

Patient Mrs. V., referred to us during the eighth month of pregnancy. The urine had contained pus for several weeks, but, as no symptoms other than mild frequency and slight pain on urination existed, her family objected strongly to the use of the cystoscope, on the grounds that abortion was inevitable. After much argument, we resorted to palliative measures consisting of hexyl-resorcinol, rest in bed on the left side, ice bags, and mild silver nitrate bladder irrigations. Under this treatment she seemed to improve remarkably, but, on the tenth day suddenly developed a severe chill which lasted almost an hour and was followed by temperature of 105. The slight pain in the lumbar region which she had attributed to the child lying in one position too

long, suddenly became extremely severe. Headache, great thirst, pain in all extremities, and pyrexia were symptoms most pronounced. She was cystoscoped and No. 6 catheters passed to the pelvis of each kidney. The right urine contained four plus pus and colon bacilli. The left urine was normal. Both pelves were lavaged thoroughly with one per cent mercurochrome solution. The left catheter was then removed. Within the next three hours the temperature was 100 and the patient was perfectly comfortable, having been given a hypo of morphia immediately after the cystoscopy. The catheter was allowed to remain in the right ureter for three days, during which time the pelvis was lavaged daily with mercurochrome solution. The temperature dropped to 99 and remained there until the catheter was removed on the third day. Within a few hours after removal of the catheter, she again had a very severe chill followed by temperature of 105. This process was repeated on four different occasions at intervals of several days until finally we concluded that the best alternative was to retain the catheter in the right ureter, with frequent and immediate changes, until she delivered. Chills and sudden rise of temperature were inevitable if we neglected to replace the catheter within two or three hours after its removal. On several occasions the catheter accidentally came down until the tip must have rested just above the lower third of the ureter, in which position it continued to drain freely and the patient suffered no unfavorable symptoms. In all, she retained the catheter in the right ureter nineteen days, at which time she gave birth normally to a healthy child, with the catheter still in position. After several pelvic lavages at weekly intervals and one dilatation of the right ureter, no pus was found in the urine.

For simplicity in discussing the treatment, we shall attempt to divide pyelitis, or pyelonephritis as it should be called, into three classifications, depending upon the degree of retention and differing from the classification of Perineau according to our own ideas.

In beginning pyelitis, or pyelitis of the first degree, the amount of pelvic retention is small, the fibers of the ureter are under some tension but have not lost their tone, renal function is not disturbed, the amount of inflammatory reaction in the ureter is negligible, and the urine passes from the kidney to the bladder with only slight obstruction. The urine contains pus, there is slight "clubbing of the calyces" and distention of the

ureter. The patient does not feel sick enough to go to bed, and complains only of the classical symptoms of mild cystitis with perhaps a dull ache usually in the region of the right kidney.

The treatment during this stage and if seen early is undoubtedly the conservative method since probably 80 per cent will improve or recover with rest in bed, mild catharsis, large quantities of water by mouth, alkalization and postural therapy, such as assuming the knee chest position for a few minutes several times a day or lying on the unaffected side in cases of unilateral involvement. The diet should be bland and carefully regulated. Urotropin, acid sodium phosphate, and hexyl-resorcinol may be prescribed alternately with alkalization, but none of the so-called urinary antiseptics can be depended upon. If these measures do not promptly prove effective, the renal pelvis should be drained and irrigated at regular intervals, preferably by the gravity method in order that the distended pelvis may not be further distended to the point where violent ureterospasms are produced. (Caulk).

The second stage of pyelitis is a continuation of the first with an entirely different phase. Here the retention is much more pronounced, the kidney function markedly impaired. With more dilatation the muscle fibres of the ureter and pelvis have become weakened and feeble, but still capable of returning to normal function if relieved of the strain of intrapelvic pressure. The ureter is markedly inflamed, its lining membrane edematous with perhaps partial or complete occlusion at one of its narrowest points. The products of septic retention have remained for a week, ten days, or two weeks, exerting their back-pressure effect and harmful influences upon the kidney.

The advent of this stage is usually heralded by chills, fever, tenderness and mass in the kidney region, and urine dirty with pus and bacteria. The ureteral catheter usually drains a large amount of milky, pale urine.

We feel very firmly that at this point the renal retention should not be allowed to remain unemptied. The classical treatment of abscess formation should apply here as elsewhere, namely: open, clean out, and drain. The products of septic retention should be evacuated with the large ureteral catheter at the earliest possible moment, the kidney pelvis lavaged with any good antiseptic used for that purpose, and the catheter allowed to remain in the ureter until the patient



is out of danger, or replaced as often as is necessary. To see the almost miraculous improvement in the condition of these patients, often within an hour or two after ureteral drainage and lavage, is one of the most pleasing experiences in the entire category of medicine. "It is surprising how quickly the musculature regains its tone, the pelvis completely emptying itself, and the urine begins to resemble the normal." (Caulk).

The mistakes that are most often made is in depending upon conservative measures, or in simply lavaging the kidney pelvis, withdrawing the catheter too soon, and then condemning cystoscopic procedures when the temperature does not remain low. Our case illustrates the point that quite often nothing is accomplished unless the catheter is retained or replaced as often as is necessary to control the symptoms.

If the retention is not relieved by this method within a short time, we are probably dealing with a third degree retention kidney which will have to be attacked surgically. Here the damage to the kidney is often irreparable. Functional tests may prove that the kidney is valueless and a constitutional menace. These women are very sick, septic, and run high irregular temperatures. All of them have large, tender kidneys, the urine cloudy with pus and colon bacilli. They have usually been allowed to run for weeks on palliative measures in spite of their failure to respond. Many will improve after drainage of the kidney by means of a large retained catheter which relieves their absorption and toxemia, also the sound kidney of toxic nephritis, and low grade uremia. In a few borderline cases the urine will become clear and culturally negative or an occasional pus cell will remain, the so-called aseptic but not cured classification of Rafen. Such kidneys may assume fairly normal function but are very prone to recrudescences. The majority have been or will be subjected to the induction of premature labor with at least 40 per cent mortality to the child and the chances very slight for anything short of nephrectomy for the patient. Few have had thorough trial with the large retained catheter in the ureter. "Many of the borderline cases will respond providing the retention has not been too profound." (Caulk).

We have said but little about the induction of premature labor. We believe that it is the most abused and least indicated of all of our therapeutic measures. We refer to the marked tendency to resort to the induction of labor when the ultra

conservative measures fail. It is our opinion that there are very few indications for abortion other than severe infections which occur very late in pregnancy or in cases of severe bilateral involvement not responding promptly to ureteral drainage and pelvic lavage. In many of these infections we are not at all convinced that vaginal Caesarean or abdominal Caesarean under local anesthesia is not the better procedure, while in severe unilateral involvements not responding to less radical procedures, we believe with Davis that the offending kidney should be attacked and that the induction of labor may only encourage delay in proper surgery.

In conclusion, we wish to emphasize the point that many cases of pyelitis are being overlooked because insufficient importance is attached to the urinary symptoms of which many of these women complain during pregnancy, and because a microscopic examination of the urine is often neglected, or the presence of pus ignored.

De Lee is emphatic in his statement that two-thirds of all women dying during pregnancy have or have had pyelitis at some time. The obstetrician is constantly on the lookout for symptoms suggesting eclampsia and pre-eclampsia. Why not observe the same diligence in attempting to avoid the graver degrees of pyelitis.

Lastly, in our treatment of pyelitis, let us remember that it is only a very short step from ultra-conservatism to major and radical methods. Here, however, the shortest way is not always the better way, to well and happy mothers, and healthy full-term babies.

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#### SOME PHASES OF OPHTHALMOLOGY THAT CONCERN THE GENERAL PRACTITIONER

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I wish to discuss some phases of ophthalmology that are of direct concern to all practitioners of medicine. Specialists in presenting papers to general medical bodies too often err in discussing points of a highly technical nature. It shall be my effort to avoid tiring you with the extremely technical phases of ophthalmology. A few of the commoner ophthalmic conditions have been selected for discussion.

#### *Ocular manifestations of general diseases:*

Many general diseases present eye symptoms and signs that are of invaluable assistance in making a diagnosis. Of all systemic diseases syphilis

is probably most prone to attack the ocular tissues, this occurring during any of its varied stages. The incidence of iritis in the secondary stages of syphilis is familiar to us all. Retinitis, choroiditis, optic neuritis and atrophy are complications of the luetic infection that are responsible for a large percentage of the blind. Ocular muscle palsies occur with great frequency in the secondary and tertiary stages of the disease and bring the patient to the practitioner with the complaint of diplopia, and blurred vision when the muscle of accommodation is involved. The occurrence of eye symptoms and signs in tabes dorsales is particularly interesting. The Argyll-Robertson pupil, optic atrophy, ocular muscle palsies being frequent occurrences and often aiding in the diagnosis when other physical findings are obscure. The question is frequently asked as to the advisability of administering salvarsan and allied arsenicals when there are ocular manifestations of syphilis. I am convinced that in syphilis with ocular pathology a thorough mercurialization of the patient should be undertaken before beginning actual arsenical medication. John H. Stokes, professor of dermatology and syphilology at the University of Pennsylvania, in an article entitled "The Principles of Syphilotherapy as Applied to the Eye," appearing in the May, 1927, issue of the Archives of Ophthalmology, very admirably presents this subject. It would be well for all those who treat syphilis to read this article.

Acute and chronic Bright's disease are frequently complicated with albuminuric and hemorrhagic retinitis. Too frequently the complaint of blurred vision is disregarded. In arteriosclerosis the fundus oculi is the one site where a visual study of the vascular condition can be made. The ophthalmoscope furnishes this opportunity. Tortuosity, irregularity of calibre, silver cord appearance are definite evidences of vascular sclerosis. The finding of such indicates a like condition in the cerebral vessels, for after all the eye is nothing more than a prolongation of the brain. Is this not of value in life prognosis?

The commoner eye complications in diabetes are retinitis, cataract, iritis, optic neuritis and ocular muscle palsy.

Ophthalmologists are frequently called upon to assist in establishing a diagnosis in encephalitis lethargica. Ocular motor palsy, particularly ptosis and optic neuritis are not uncommon accompaniments of encephalitis. Measles and scarlet fever frequently attack the ocular tissues, pro-

ducing chorio-retinitis, blepharitis and conjunctivitis.

#### *Expanding lesions within the intracranial cavity:*

Intracranial neoplasms so frequently manifest themselves ophthalmically that diagnosticians do not consider any suspected case well studied until a complete eye examination has been made. Eighty per cent of the brain tumor cases present a papilledema at some time during their course. Study of the fields of vision, muscular balance, blind spots are invaluable aids in this field of medicine.

The classical triad, headache, vomiting and papilledema are always suggestive of expanding lesions within the cranial cavity. Here the ophthalmoscopic examination furnishes the most important link in the diagnostic chain. Together with the triad we may observe involvement of any or all of the cranial nerves supplying the eye, namely: third, fourth, fifth, sixth.

These so-called intracranial expanding lesions may be brain tumor, brain abscess, edema of the brain tissues, aneurysm, hemorrhage or osteoma of the inner plate. Do not overlook the value of ophthalmoscopic examination in questionable cases of increased intracranial pressure in skull fracture. The appearance of papilledema tells a very definite story and is frequently of inestimable value to the general surgeon in determining whether or not decompression is indicated.

#### *Ocular manifestations in pregnancy:*

Contraction of the fields of vision during pregnancy is the rule. This is due to an enlargement of the hypophysis which impinges on the optic tracts. Toxemia of pregnancy frequently attacks the ocular tissues producing retinitis, choroiditis, optic neuritis, optic atrophy and retinal detachment.

The commonest ocular complication of pregnancy is hemorrhagic retinitis. The patient complains of blurred vision and spots before the eyes. These complaints should always indicate the necessity of an ocular examination. Having determined that the patient has a hemorrhagic retinitis prompt termination of the pregnancy is practically always indicated.

It is of paramount importance that obstetricians understand that form of blindness attributable to uremia. Ophthalmoscopic examination of the fundus oculi reveals no pathology, although the patient complains of loss of vision. The pupils react to light directly and consensually.

The blindness in this condition results from the toxic effect of uremia on the brain cells. The presence of pupillary light reaction indicates a cerebral lesion superior to the primary optic centers, presumably, cortical. Uremic amaurosis sets in suddenly and usually totally annihilates vision. In the event the patient recovers from the uremia the vision is usually unimpaired.

#### *Refraction:*

The keystone of all ophthalmic practice is embodied in refraction. Eye strain, headaches, nervousness and poor vision are the findings which prompt an examination of the refractive state of the eye. The general physician is apprised of these complaints during the course of the physical examination and yet too often does not see that the patient is guided into the proper channels for a scientific ocular examination. Many patients are permitted to consult opticians and optometrists for eye examinations whose one object is the sale of glasses. Judgment of the finest sort must be exercised in advising the wearing of lenses. The interest of the optician and optometrist centers in the financial rewards that accrue from the sale of glasses. Many persons are wearing glasses unnecessarily because of the commercial eagerness of the optical tradesmen. Lenses should be prescribed to furnish better vision or relieve symptoms.

#### *Strabismus:*

Strabismus or squint may be due to refractive errors, defects of fusional faculty, anatomical defects as paralysis of ocular muscles, anomalies and blindness.

Squints resulting from ocular muscle paralysis are of especial interest to the general practitioner. Syphilis is the most frequent cause. Diphtheria, whooping cough, epidemic meningitis, influenza and the acute exanthematous are also etiologic factors. The treatment of this type of squint is the treatment of the general condition augmented by some of the usual methods of treating ordinary squint.

Concomitant squint is that type not due to muscular paresis and usually is seen in the first years of life. Refractive errors and fusional defects are responsible. Unless treated early the vision and faculty of binocular vision is irreparably lost. Too often the parent of a squinting child is advised to wait until the child is older before consulting an oculist, with the result that the use of the squinting eye is forever lost.

The general physician is the one who usually has first contact with patients afflicted with the squint deformity and for this reason it is paramount that he should inform himself as to the hazards that will result in untreated cases. Too often the fond parents of a cross-eyed child are told that their child will outgrow the deformity and procrastination results in a continuance of the cosmetic handicap, as well as permitting a rapid deterioration of the vision in the deviating eye. Many of these patients if seen early by a competent oculist could be treated by refractive correction and exercises and the necessity of an operation avoided. The reasons for advocating early correction of squint are three in number. (1) Loss of vision in the deviating eye will certainly follow disuse and a squinting eye is not used. The rapidity of deterioration may be said to be greater in the very young and that it lessens with the increase in years. (2) Unless treated, loss of binocular vision, or the power to use the two eyes together, will ensue. (3) Cosmetic improvement. Many children grow to adulthood laboring under the severe handicap of being cross-eyed. In school they are backward and timid because of their deformity. They avoid contact with other children. As they mature they become more and more conscious of their handicap and after reaching adult life continue to be retiring and backward. What is more pitiable than a young, otherwise attractive woman with an eye that turns in or out? It is interesting to note the change that takes place in adults who have squint deformities corrected. Frequently a person of retiring disposition and with little care of personal appearance will undergo a complete transformation.

The treatment of squint varies, but every patient afflicted with such a deformity should receive a most thorough examination by a competent oculist at the earliest possible opportunity. The first point to be determined is the cause of the deviation. If a paralysis of an ocular muscle is the etiologic factor, then additional information is to be sought as to the cause of the paralysis. This should be handled in conjunction with the general practitioner as well as the subsequent general treatment that may be necessary. Refractive errors are always to be held uppermost in one's mind when investigating a squint and should invariably be estimated only after a complete relaxation of the ciliary muscle by means of thorough atropinization. It is my rule to have all



squinting patients who have a refractive error of any consequence wear lenses continuously over a period of at least six months before advising further steps. Combined with the wearing of lenses, exercise of the lazy or deviating eye is obtained by covering the strong eye for a definite period each day. This forces the deviating eye to fix and in many cases increase vision.

Many patients will require operative interference. The age at which this should be done is a most important point. Frequently parents are instructed to wait until their child reaches the twelfth or fifteenth year of life for the operation. During this time a total or partial loss of vision in the affected eye occurs, to say nothing of the loss of the fusional faculty. As soon as I have assured myself that nonoperative measures will not suffice to correct a strabismus, I advise operation without delay.

#### *Cataract:*

Cataract is an opacity of the crystalline lens or its capsule. This opacity may occupy the minutest part or whole of the lens structure. The interference with vision is dependent upon the amount of the opacity and its position. Peripheral lens opacities are frequently seen in elderly persons which cause no interference with vision. It is a mistake for the oculist to inform these patients that they have cataract, for in many instances the opacities do not increase in size and never cause interference with vision. The development of near-sightedness in the elderly is of great import for it usually indicates a definite change in the nutritional condition of the lens and is the forerunner of cataract. The myopia is due to the swelling of the lens fibres and occasions the popularly known "second sight" which enables the aged to lay aside their reading glasses. The condition is a definite indication of cataract development, but does not necessarily mean that the cataract will go on to maturity. The finding of small lens opacities is certainly a definite indication for effort to prevent the further progress of the opacification. Too frequently the elderly person conscious of some change in vision, frequently only a slight diminution, consults the physician or oculist and after examination is informed that he has cataract, but that nothing can be done except to await the ripening of the cataract after which surgery will afford relief. To my mind this is unpardonable, and I believe that in every instance a careful physical survey should

be made with the idea of eliminating all sources of infection and toxemias which certainly bear a definite relationship to lens opacification. I insist upon a physical examination and the elimination of such defects as may be found. The use of dionin instilled into the conjunctival sac stimulates the intraocular circulation, thereby increasing the nutritional fluids of the crystalline lens. Subconjunctival injections of sodium chloride and cyanide of mercury also stimulate lens nutrition by bringing about an increased interchange of intra and extra ocular fluids. Recently lens antigen has been advocated in incipient cataract, but it yet remains to be seen whether or not it is of great value. My observation has been that it will assist in arresting incipient cataract in about 50 per cent of the cases. It must be understood that lens antigen is only serviceable where cataractous changes are observed while the vision is still serviceable.

Operative treatment of cataract is most satisfactory. Properly performed cataract extraction is one of the most beneficent things modern surgery can offer. Normal or nearly normal sight is the rule in the hands of experienced operators. Experience, skill and precision are most essential in this procedure. Preparation of the patient for the operation is always to be considered of great importance. A complete physical examination is essential, for many times one finds prospective cataract patients with positive Wassermann, urine loaded with sugar, or mouths teeming with dental infection. If these physical defects are disregarded by the cataract surgeon the incidence of intraocular infection and total failure to restore sight will be enormous. It is here that the cooperation of the general physician is invaluable.

#### *Glaucoma:*

One of the most important ocular diseases requiring the responsibility of the general practitioner is that of glaucoma or hardening of the eyeball. It occurs in two forms, (1) acute, and (2) chronic. The more important manifestations of acute glaucoma are pain coming on suddenly and involving the entire distribution of the fifth cranial nerve of the side involved. The pain is frequently so intense that there is depression, nausea and vomiting. The vision is usually rapidly reduced. There is intense congestion of the vessels of the eyeball together with a steamy or ground glass appearance of the cornea. The iris is congested and the pupil dilated and fixed. The

eye is extremely hard to the touch. Rapid contraction of the fields of vision is the rule. With a continuance of the increased tension a total loss of vision will most certainly result.

Chronic glaucoma is one of the most insidious ophthalmic diseases. There is no congestion of the eyeball to warn of the impending danger, nor is there pain. The cornea is clear, anterior chamber is usually shallow and the pupil slightly dilated. The ophthalmoscope shows in the latter stages a nerve head paler than normal and usually cupped. The patient's vision may remain good until the disease is far advanced. However there is usually a marked contraction of the fields of vision. In some instances the contraction of the fields of vision is so extensive that the patient has what is called "telescopic" vision, or that type which may be demonstrated by one's looking through a mailing tube.

Acute glaucoma invariably requires surgery, iridectomy ordinarily accomplishing a reduction of tension. Chronic glaucoma in many instances is amenable to medical treatment, when this fails iridectomy, trephine or other filtering operations should be done.

The prognosis can be given if the physician is forced to operate. In a high percentage of cases normal or nearly normal tension can be obtained and kept, and the risk from operation is not great. It is well to remember, however, that glaucoma patient cannot be dismissed after the operation as one can never be sure that the tension will remain normal. The patient with chronic glaucoma must be watched whether the operation is performed or not.

#### *Toxic amblyopias:*

Toxic blindness or amblyopia is frequently encountered in general practice. After large doses of quinine, *felix mas* and methyl alcohol blindness may come on suddenly or at least within a few days. The continuance of administration of the drug usually causes a permanent loss of vision, whereas prompt discontinuance with eliminative measures in most instances means a return to normal of vision. This is of extreme interest to those who treat malaria. Nicotine and alcohol blindness are due to chronic poisoning by these substances. The loss of vision is a gradual one, the patient usually consulting the physician because of inability to read. The examination of the fundus, as a rule, shows no pathology. A central scotomy for colors together with loss of

vision enables one to make a diagnosis. Abstaining from the use of the causative substance together with eliminative measures usually suffice in restoring the vision if the condition is not one of long standing.

### MODERN DIAGNOSIS OF DISEASES OF THE URINARY TRACT\*

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To many, cystoscopy seems a needless procedure; however, without the cystoscope, diagnosis in 50 per cent of cases of urinary surgery is little more than guesswork. With the cystoscope, and especially when ureteral catheterization and X-ray examination are combined with it, we can arrive at an early diagnosis of all the so-called surgical diseases of the urinary tract and be far more accurate and more complete than can your diagnosis in any other system in the body. Notwithstanding this, however, most of these cases reach an advanced stage where much damage has been done requiring extensive surgical interference for their alleviation before the true condition is recognized. This is largely due to too much reliance being placed on internal urinary antiseptics, long continued bladder irrigations or similar treatment.

In this paper I do not intend to make an exhaustive study of the cystoscope and its associated procedures, such as ureteral catheterization and pyelography, but rather to point out the ease and accuracy of early urological examination in cases with symptoms pointing to involvement of the urinary tract, reviewing the technique the urologist finds necessary to go into the elaboration of a detailed and accurate diagnosis.

The procedure for making such an examination is time-consuming, expensive and it may be unpleasant, but ineffectual treatment, where a careful preoperative examination with the cystoscope and ureteral catheter, together with the X-ray has not been made, is far more costly and disagreeable, leading to chronic invalidism in a number of cases.

That you should avail yourself of complete cystoscopic investigation in suspected lesions of the urinary tract is proclaimed over and over again by that vast army of patients who have been diagnosed and treated for some abdominal condition, operated and reoperated upon without relief, later

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to be found with the pathological condition in the urinary tract. We in the South have urinary chills interpreted as malaria and treated with quinine and trips to the mountains season after season. Ninety per cent of the urinary calculi in my own practice have been treated for malaria at some time since the history of the symptoms began and practically all of them have taken urinary antiseptics at one time or another to clear up their urine. At the Mayo Clinic, over fifty per cent of the patients with right-sided renal and ureteral lesions diagnosed have had one or more futile operations performed. With these facts in hand it would certainly be folly to attempt to determine the existing pathological lesion in the urinary tract without the employment of the cystoscope, just as much so as it would be to classify a comatose patient as of uremic or diabetic origin without blood chemistry confirmation.

We often find the physical examination negative in urological lesions. However a general examination to rule out tuberculosis, diseased heart, tumor metastases and other conditions is important. In the kidney region, tenderness and rigidity on palpation as well as tenderness on deep percussion are the chief signs looked for, remembering that the normal kidney is seldom palpated even in the thinnest abdomen. Much can be learned about the bladder by abdominal, rectal and vaginal palpation. I have had three cases where stones lodged in the lower portion of the ureter in the female could be palpated bimanually. In the male the prostate must be studied and properly diagnosed as to the degree and character of enlargement as well as the amount of obstruction the enlargement causes to the urinary flow.

Each case presenting has a tentative diagnosis made by obtaining information of the present and past history, a complete physical examination, a complete examination of the urine, using one of the multiple glass test in the male and catheterizing the female, noting residual urine if present, bladder capacity and tone, the making of necessary smears and their microscopical examination, rectal palpation of prostate and seminal vesicles with a microscopical examination of their secretions, examination of urethra for possible stricture followed by a systematic cystoscopic examination with X-ray collaboration.

X-rays are only indirect evidence, their findings being gross and not microscopic; on the other hand cystoscopic procedure alone is only of value

in locating lesions in the bladder and urethra, for collecting urine from each kidney for analysis, culture or functional test, or for instrumentation or topical application of treatment to located pathology in the urinary tract. Therefore it is necessary to combine both radiography and cystoscopic examinations, as either alone is of relatively little value.

We have adopted special urological tables with built-in Potter-Bucky diaphragm for both hospital and office examination, making our preliminary radiogram before cystoscoping the patient. If these radiograms are negative we are careful to collect all cystoscopic data possible before further radiograms are made. Routine cystoscopic examination consisting of (1) a thorough exploration of the bladder wall, remembering that most all bladder pathology is in the lower quadrant; (2) a study of the appearance of the sphincter muscles; (3) examination of the posterior urethra; (4) the urethral orifices are inspected for size, shape, patulence and evidence of inflammation, noting the efflux from each; (5) catheterizing each ureter, using lead catheters, determining the presence or absence of obstruction due to stone, stricture, tumor or kinking; (6) a differential functional test, using phenolsulphonaphthalein, which is an organic dyestuff toward which the body reacts as it does toward urea. It has been stated that when phthalein excretion is high we may be confident that there is no nitrogen retention in the blood. This is not always true, the particular exception being found in acute nephritis. Here the kidney is able to eliminate phenosulphonaphthalein, urea, etc., in normal concentration, but the trouble lies in the water excretion, which is so greatly impaired that not enough water can pass through to prevent the damming back of urea in the blood.

After completing the above, the procedure is entirely dependent on the individual case and varies considerably. If pyleography is to be done, the appearance time of the phenolsulphonaphthalein is carefully noted; if synchronous and within normal limits a small amount of urine is collected for a limited period. During this time the preliminary radiograms are made, using 14x17 films showing a complete X-ray of all urinary organs. If the usual difficulty of one catheter or the other refusing to flow cannot be overcome and there is evidence of complete inhibition of kidney function, no injection of pyleographic medium is made on that side. If this inhibition is due, however,



to an obvious pathological state, such as stone, stricture, tumor, etc., which may or may not cast a shadow in the X-ray plate, pyleography is done, your own judgment being the guiding factor.

There are two methods of introducing the pyleographic media into the kidney pelvis, the gravity method and the bulb syringe; care must be exercised with either method to prevent grave results.

The establishment of a differential diagnosis in certain pathological conditions of the kidney can be extremely difficult even with full cystoscopic and X-ray findings. Notice may be directed to the kidney either by urinary abnormalities, pain, the presence of a tumor in the renal area, or a combination of these. A tumor may be caused by hydronephrosis with or without stone, pyonephrosis, tuberculosis, polycystic kidney or various other less common conditions, all of which are capable of giving somewhat similar urinary findings. Here pyleography is especially important in the differentiation of these conditions and in many instances will establish the diagnosis independently of any urinary findings.

Stone in the kidney may cause great pain or no discomfort whatever. The radiogram is particularly valuable for diagnosing stones, but at times may be most misleading.

Eighty-five per cent of all stones will show in the X-ray plate without pyleographic solution in the pelvis of the kidney or ureter. Having lead catheters in the ureter facilitates greatly the reading of the radiogram in these cases. The diagnosis of ureteral calculus is sometimes rendered uncertain by the presence of a phlebolith or calcified glands which lie in the same plane as the ureter. The ureterogram, even though it shows definite dilatation above the level of the suspected stone shadow, may be produced by stricture. Here the only absolute method of diagnosis is by means of stereoscopic urography. A combination of cystoscopy and radiography should give a positive diagnosis in all cases.

The fifteen per cent of stones not visible in the film can often be discovered by passing a wax-tipped catheter and noting the scratches thereon when the catheter is withdrawn. Even a large stone which does not cast a shadow in the radiogram will often show a thinning out of the pyleographic shadow at the point where the stone lies.

The appearance of vesical stone presented with the cystoscope is striking and characteristic, it being now conceded that no diagnosis of stone is accurate without cystoscopic confirmation, the

reason being that direct visuality has less room for fallacy than any other method of diagnosis. The cystoscopist must be careful that his instrument does not run in under the stone or stones, the stones being large enough to be held up by the cystoscope are thus out of the field of vision.

In cases where urinary obstruction is met in the urinary outflow, thereby bringing the detrusor muscles into increased action, causing a diverticulum or diverticulæ, and the stone lodges and enlarges within a diverticulum of the bladder wall, the cystoscope is of inestimable value in clearing up the diagnosis. Trabeculation of the bladder wall is also caused by incoordination of the detrusor muscles and the vesical sphincter, this being an early sign of cerebro-spinal syphilis. It is marked on the anterior wall of the bladder and may be accompanied by a relaxed sphincter outlet.

Stricture of the ureter can readily be demonstrated by pyleography and urography. A catch will be produced on the passage and withdrawal of a wax bulb-catheter, or on the introduction of a ureteral catheter. This is a quite common condition in women, and Morrissey finds stricture of the ureter frequently in the male and believes the condition to be due to focal infection. A persistent mild pyelitis or a persistent nephralgia will occasionally clear up by the mere passage of ureteral catheters dilating the stricture and establishing free drainage.

Hematuria is usually intermittent. It is a symptom, not a disease, and the clearing of the urine does not mean the cure of the disease. Unfortunately, the patient, and not infrequently the practitioner, also, finds difficulty in realizing this point, and it is only after repeated attacks of hematuria and considerable period of time has elapsed that the patient is submitted to complete examination with the cystoscope.

In all but the most simple cases of hematuria you must use instruments of precision to make an accurate diagnosis. In a case where hematuria is the principal symptom, two problems arise. First, the localization of the bleeding to one part of the urinary tract; and, second, the investigation of the cause of the bleeding. These two points may be settled simultaneously, or the bleeding may be localized as in one kidney, but the actual cause remains obscure. Sixty-four per cent of Chutes' cases were due to new growths in the urinary tract. Kretchmer claims that hematuria, with few exceptions, means the presence

of organic disease in the urinary tract. It is therefore advisable to use all the accompanying symptoms of hematuria as a means of localizing the hemorrhage and diagnosing the cause, but to remember that these symptoms may prove fallacious and that it is necessary in all cases to cystoscope the patient while the hemorrhage is present, if possible, thus facilitating the ready location of the bleeding point. The idea that the blood will obscure the cystoscopist's view is fallacious. The two methods that have been used in such cases of hematuria are exploratory operation and cystoscopy. No one would ever think of emptying the bladder or kidney by a random operation when cystoscopy is available, but this attitude is of comparatively recent date. The diagnosis of idiopathic hematuria should be made only after autopsy has failed to reveal the cause of the hemorrhage. True hemorrhage may be differentiated from *hemoglobinuria* by the microscope.

The possibility of error in the diagnosis of renal tumor will be considerably lessened by careful consideration of factors which may produce a pelvic outline simulating that caused by tumor. A blood clot may produce a filling defect and a pelvis incompletely filled may prove misleading.

Eight per cent of all tumors of the body are found in the urinary tract. In almost all cases their first symptom is hematuria, which is either initial, total or terminal, according to the location and character of the hemorrhage, but it comes on suddenly in the majority of cases. It may be intermittent or constant, may continue for days, weeks or months, in spite of any or all palliative treatment.

To one experienced in interpreting pyleograms, diagnosis of small and early renal tumors can be made and operative treatment instituted before metastases have occurred.

Treatment of tumors of the bladder and posterior urethra, other than those of the carcinomatous type, is best accomplished with diathermy. The only preparatory or after-treatment required is some internal medication to render the urine antiseptic. The number of treatments vary according to the condition of the individual case at hand.

An early diagnosis and proper treatment of renal tuberculosis is of extreme importance. The characteristic symptoms are: age, twenty to thirty; urinary frequency, both diurnal and nocturnal; hematuria present in seventy-three per cent of

the cases, loss of weight, fever and pain as late symptoms.

Renal tuberculosis is always secondary, therefore delay in making your diagnosis and removing the infected kidney usually results in a bilateral involvement.

Cystoscopy in children is a phase which has not been given as much attention as it deserves, perhaps because of the greater difficulty in accomplishing such investigation or because indications are deemed insufficient. Many urologists believe that the indication exists more often than the procedure is carried out. Bugbee and Wollstein found 2.3 per cent anomalies of the genito-urinary tract in a series of 4,905 autopsies. Infection superimposed upon such anomalies very frequently give rise to symptoms and are diagnosed with precision only with the aid of complete cystoscopic examination. Many of the unexplained cases of pyelitis, recurring or protracted, are often the result of some malformation of the urinary tract. Too often obscure abdominal pain in children is regarded as of intestinal origin, when in reality some lesion in the urinary tract is the cause of it.

The general rule that no instrumentation should be employed in the urinary tract which is not necessary to complete a diagnosis, should be strictly observed, but the cystoscope should be more generally used by the general surgeon as a means of making certain that the urinary tract is not the offender. More accurate diagnosis would result and unnecessary surgical exploration of the abdomen would be less often resorted to if such diagnostic accessories were more commonly used.

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REMARKS ON CANCER—WITH CASE  
REPORT OF COLLOID CANCER OF  
TRANSVERSE COLON

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When I was asked to write a paper for this meeting, I had been studying the literature on cancer, and it was my intention to take up some one phase of this many-sided subject and present it to you, but I found my time so limited that I could not do this, so I am going to make a few remarks on the subject of cancer in a very general way and report one case of colloid cancer, or carcinoma gelatinosum.

Cancer is the biggest subject in all medicine and there has been more research done and more written on cancer than any other thing in medicine. It has engaged the attention of the internist, the surgeon, the eye, ear and throat men, the physicist and the public health worker.

I will not bore you with the classification of cancer, as this can be found in any textbook, and, besides, you are all familiar with the various types.

Cancer is no respecter of persons or organs, as we find it in the rich and the poor, yet it is my experience that the poorer classes are somewhat more prone to the disease. This may be accounted for by the fact that they do not present themselves to their physician at the first signs of trouble nor do they bother to have precancerous conditions corrected to the same extent as their more well-to-do neighbors. I have not seen any statistics on this and am sure that a compilation of such data would be most interesting.

While there are certain organs which seem more prone to cancer, yet there are practically no tissues of the body which are immune.

The etiology of cancer has possibly claimed more research attention than its cure, as there has been always the feeling that if the cause of cancer could be found its cure might be simple, but about all that is known of its etiology is that it is usually caused by some form of irritation and that scar tissue, which is the lowest form of tissue, furnishes the best soil for its growth.

Even this small knowledge has been of the greatest benefit in the prevention and cure of this loathsome disease, as we feel that where scar tissue can be and is removed, we have eradicated one source of possible cancer; this is best exemplified in the removal of scar tissue and the repair of lacerations of the cervix uteri.

The fact that cancer is due to irritation is easily seen in the pipe smoker, where constant pressure and heat of the pipe stem produces a great number of cancers of the lip, and when we find cancer of the mouth and tongue we usually find a jagged tooth.

C. H. Mayo believes that cancer of the stomach is caused by drinking liquids that are so hot or so cold that they cannot be held in the mouth, and are tolerated by the stomach because of its limited nerve supply.

Everyone, I believe, is in accord as to the object to be sought, and that is the eradication or the destruction of the cancer cells. They only differ in the method of accomplishing this end.

The surgeon says wide and thorough excision; the radium enthusiast says radium; the X-ray man says deep therapy or X-ray; others say actual cautery; while a few still believe in arsenic paste.

Personally, I believe all these methods, with the exception of arsenic paste, constitute the proper known remedies for dealing with cancerous lesions, and it only depends upon the location of the lesion, the extent of the involvement and the general condition of the patient as to which method or which combination of methods is best to be used.

We know that certain lesions yield readily to radium, while in other lesions radium is useless, and probably in most lesions where radium is effective the X-ray will in all likelihood effect the cure, but certain lesions are more easily handled by radium on account of inaccessibility to X-ray. Some lesions are more easily handled by radium emanation than by the element for the same reason.

In other cases the X-ray, either alone or in combination with surgery, is the method to be elected.

The actual cautery has proven its value, and possibly the best method of cauterization is by the dull heat of the soldering iron rather than the electric cautery, but, unfortunately, there are many cancerous lesions in which all these methods fail, as is too well evidenced by the tremendous death rate from this disease, and we, too, often find ourselves faced with a hopeless condition and all our methods are of no avail, and we realize that the specific for cancer is yet to be found. But, being an optimist, I believe that the day is coming when the researcher will tell us the true cause of cancer and a specific will come.



Case No. 4657.—Mrs. E. L. E., White, Female, age 57.

*Chief Complaint:* Pain in mid abdomen.

*Onset:* Pain in left side came on suddenly about six weeks prior to admission. Pain, sharp and shooting in character, and referred toward ribs and pelvis. Pain is absent when lying on back and is constant when on feet or lying on side, especially if lying on right side.

Complains of pain and soreness in left leg, especially when walking. There was never any nausea or vomiting.

*Family History:* Father died age 77. Mother died age 63 of pneumonia. One brother died of carbuncle, another brother died of pneumonia. One sister died of cancer of breast, another sister died suddenly, cause unknown. Other than the one sister there is no cancer in family.

*Past History:* Always healthy, able to do hard work. Had smallpox, measles and whooping cough and a few mild malarial attacks. Abscessed tooth removed three years ago. Began losing weight eight months ago. Has lost twenty pounds, during all this time has felt stupid and sluggish. Appetite poor for past two months. Has had no indigestion and bowels have been regular.

*Physical Examination:* Heart, lungs, thyroid, blood pressure, reflexes normal.

There is a palpable and fixed mass in left upper abdomen, not continuous with the palpable spleen. Mass is very painful on palpation. Patient is pale and looks ill, although temperature and pulse are normal.

This is the picture before us and we must attempt a diagnosis and believe we can rule out all but three things, namely, first, tumor mass (probably cancer); second cyst of pancreas; third, gumma of colon.

It is quite evident that we need laboratory aid, so we request a Wassermann, a complete blood count, urinalysis, blood chemistry and examination of feces. We get the following report:

*Wassermann:* Negative.

*Complete Blood Count:*

W. B. C., 9,450.

R. B. C., 4,440,000.

Hemoglobin, 73%.

Differential Count:

Poly., 67.

Small Lymphs., 23.

Large Lymphs., 5.

Easin., 1.

Baso., 0.

Trans., 4.

Malaria, None seen.

*Blood Chemistry:*

Non-protein-nitrogen: 42.2 mgms. per 100 c.c. of blood.

Sugar: 322.5 mgms. per 100 c.c. of blood.

*Urinalysis:*

Straw, cloudy, 1.017.

Acid—total acidity, 25%.

(24-hour specimen)

Albumen, none.

Indican, none.

Sugar: Benedict's, one plus; Fehling's, trace.

Diacetic acid, none.

Acetone, none.

The sediment consists of much phosphate, two coarse granular casts, quite a few epithelial and pus cells and a few fibers and mucus threads.

*Feces:*

The specimen shows a medium soft brown stool with no fatty appearance. Microscopically: The slide shows a few fat droplets. Occult blood: three plus.

The blood sugar finding directed our attention to the pancreas, but on getting X-ray report, which follows, we dismissed the pancreas, and thereby hangs a tale which will be brought out later.

*X-Ray Report:* I cannot find any filling defects in the stomach and small intestines. They were free of contents at the end of six hours. The twenty-four-hour study showed a filling defect in the third portion of the transverse colon. The barium enema proved this defect to be constant, it was impossible to get the material to pass through with ordinary palpation. This filling defect corresponds to the palpable mass. I was unable to separate this portion of the bowel from the mass during the fluoroscopic study. I believe that the case is one of malignancy involving the colon.

*Operation:* January 25th, 1928.

Condition during anesthesia: Pulse 100 at beginning of operation. Volume fairly good. Respiration O. K. During deep work pulse went up to 140. Volume poor, irregular. Seven and one-half grains *caffenia* of *sodii* ——— given at 12 noon.

Findings: Tumor mass third portion of transverse colon.

What was done: Left rectus incision. Classical resection of involved portion transverse colon. Proximal and distal gut ends closed. Lateral anastomosis.

Immediate post-operative condition: Very poor. In marked shock. No hemorrhage (excess).

*Progress Notes:* Reacted with slight nausea.

January 26: Condition fair.

January 27: Temperature and pulse high.

January 28: Temperature and pulse higher.

January 29: Temperature and pulse lower. Condition good. Retaining nourishment. No abdominal distention. Passing some gas. Feels fine.

January 30: Condition remained good, but urine shows two plus sugar. About midnight patient became very much worse and was in coma at 3 a. m. When twenty units of insulin and fruit juice was given laboratory made following report, January 31:

Sugar: Two plus.

Acetone: Two plus.

Blood sugar: 350 mgms. per 100 c.c. of blood at 9 a. m.

Forty units of insulin at 9:30 a. m.

Blood sugar at 11 a. m.: 300 mgms. per 100 c.c. of blood.

Patient died in coma at 3 p. m.

In my opinion the diabetes was the deciding factor in the case, and we might have erred in not giving insulin prior to operation, although I believe we had a metastasis to pancreas from the colon cancer.

Dr. Erickson, our pathologist, makes the following report on excised tumor mass, and we hope that she will also discuss briefly colloid cancer as a group.

Examination of the segment of large intestine shows a pale, soft tumor mass, four to six inches in diameter; longitudinal section of the mass shows the lumen filled with an amber, gelatinous material with ulcerating areas. The proximal portion of the bowel shows hypertrophic walls and a polyp which functions as a valve obstructing the passage. The microscopic examination of this tumor is typical of the group showing the thickening of the walls, ulcerations in the mucous membrane; the colloid substance may occur in epithelial cells or in cavities lined with epithelial cells; usually very little tendency is shown to encapsulation by fibrous tissue.

Colloid carcinoma of the intestine may produce intestinal obstruction; the tumor grows by expan-

sion and although it rarely produces glandular involvement it is apt to produce metastases in the abdominal viscera. It is possible for small primary nodules to produce extensive carcinomatosis which may clinically resemble tubercular peritonitis.

Ewing considers it somewhat remarkable that carcinoma very rarely develops in chronic ulcerative proctitis or colitis; the development of tumors at the ileocaecal valve, at the junction of the appendix, at the rectal folds and at the anus may be influenced by interruption of the structure of the intestinal walls.

Brill (A. J.), reviewing some 3,500 cases of intestinal tumors, observes that they increase in frequency from the cæcum toward the rectum. The occurrence of malignancy in the appendix is given by numerous investigators to vary from 0.39 to .46%.

#### TUBERCULOSIS OF THE KIDNEY\*

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Tuberculosis of the kidney is a progressive infection, slow in its development, often remittent and is usually not primary in the kidney, but depends upon a focus in some other part of the body. Dr. O. S. Fowler found that one in seven patients in tuberculosis institutions around Denver showed bacilli in the urine. Autopsies on adult consumptives at the Pathological Institute at Prague, showed 5.6% to have renal involvement. Of 430 patients admitted to Piedmont Sanitarium, Virginia, three had definite renal tuberculosis. Evidence of extra renal origin was found in 71% of patients operated upon for renal tuberculosis at the Mayo Clinic since 1912.

The kidneys are constantly being called upon to remove micro-organisms from the blood. The fact that active tubercle bacilli are at times excreted by the kidneys without renal involvement is, therefore, not surprising. It is when some slight injury, mechanical, chemical, or bacterial, lowers the kidney's resistance that it becomes prey of this disease. This probably explains the reason for the condition being at first unilateral. Only one in seven or eight cases are bilateral when first seen.

A miliary tubercle is formed by proliferation of the connective tissue and endothelial cells and

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the production of giant cells enclosing one or more tubercular bacilli. Lymphoid cells and leucocytes are scattered thickly in the periphery of the lesion. These unite, forming nodules of varying sizes, the connective tissue in its effort to wall off the process and hyaline degeneration and inhibit the blood supply. Caseation and sometimes liquefaction occur. In this way is formed the caseo-cavernous type of tuberculosis of the kidney. Depending upon the resistance offered the tuberculous areas vary in size from minute specks to complete involvement of the kidney parenchyma. Such an area has been known to rupture through the cortex, causing a perinephritic abscess with a resulting tuberculous sinus in the loin. Also rupture sometimes occurs in the pelvis, setting up a tuberculous pyelitis, terminating in pyonephrosis. Payne and McNider, in the study of essential hematuria, have called attention to dense masses of fibrous tissue forming in the medulla as a result of infection. The contraction of the fibrous tissue forms an obstruction to the return flow of blood through the *venulae rectae*. Varicosities result which rupture, causing hemorrhage. This same condition most probably exists in tuberculosis of the kidney, causing hemorrhage. In some cases nodules have been found extending from the medulla through the cortex. The bleeding came from the corresponding calyces. In the cirrhotic type of renal tuberculosis there is almost complete replacement of the kidney parenchyma by fibrous tissue. This condition is seen in patients having very great resistance.

Tuberculosis of the kidney most frequently makes itself known by bladder symptoms. Often there is at first a simple polyuria, due to over-secretions of the affected organ. The patient notices that contrary to his usual habits, he has to get up one or more times at night to void. Later, due to involvement of the ureter and bladder, urination becomes painful and more frequent. It is one of the tragedies of medicine that many of these people are treated for cystitis or nervous bladder until the disease has become advanced before an examination is made.

A dull aching pain in the region of the kidney is complained of in about 85% of patients. Some of them complain of pain in both sides, while the disease is very clearly limited to one kidney. Pain in the uninfected kidney is at times misleading. It is explained by physiologic hypertrophy stretching the capsule as the kidney takes on the work of

its disabled fellow. There often is acute radiating pain caused by the ureter becoming blocked by blood clots, or flakes, of pus.

Hemorrhage is noted in about 25% of cases. Occasionally it is the predominating symptom and may be mistaken for essential hematuria. Lesions of the kidney have long been known to be the cause of gastrointestinal disturbances. Patients presenting themselves with indigestion or accumulations of gas and abdominal pain not definitely due to the gastrointestinal organs should have a thorough investigation of the genitourinary system. When the disease has become advanced there is a loss of weight, a feeling of lassitude, and often afternoon temperature.

The diagnosis of tuberculosis of the kidney is dependent upon a carefully taken history and physical examination, and the intelligent use of the cystoscope, the microscope, and the X-ray. This history will bring out some or all of the symptoms mentioned above by the physical examination we will note any evidence of tuberculous lesions in other parts of the body, costovertebral tenderness, and often palpable enlargement of the affected kidney. The two most frequent chronic diseases causing enlargement of the kidney are tuberculosis and malignant disease. Malignancy is almost always seen in the first and after the fourth decade of life. Therefore, palpable enlargement of the kidney between the ages of 10 and 40 are most apt to be tuberculous.

Merely a clinical examination of the urine means very little in the diagnosis of renal diseases. Albumen is constantly present in renal tuberculosis and also is often seen following excessive protein diet, vigorous exercise, excitement, and sometimes is due to faulty posture. It is to the microscopical elements that we must look for evidence incriminating the kidney with tuberculosis. Pus cells are always present in kidney infections and where pyogenic organisms cannot be found by smear or culture, tuberculosis is to be strongly suspected, especially if the majority of the cells are of the mononuclear type. Tubercle bacilli can be found in about 70% of cases if conscientiously looked for.

The best method of obtaining a sediment is that of Focell. The sediment is allowed to form for 24 hours in a high container, then the bottom part is centrifuged at 8,000 revolutions per minute. Guinea pig inoculation gives about the same percentage of positive findings, but takes from 10 days to 6 weeks for results to be obtained.



Every patient complaining of pain referable to the urological tract, of frequent urination, with pus in the catheterized urine should be cystoscoped. The earliest cystoscopic evidence of tuberculosis of the kidney is an area of hyperemia and swelling around the corresponding ureteral opening and extending out from it along the trigone. The hyperemia is dull red and gives an appearance of long-continued irritation. There is at this stage a diminution in the contractability of the orifice. There may be seen small pearly tubercles near the orifice, which later coalesce, forming nodules with resulting necrosis and ragged ulcers. At this stage the orifice stands open. A round or irregular hole in the bladder wall and the ulcers have spread to other parts of the bladder.

The entire mucous membrane is hyperemic with many areas of granulations and ulcers. Sometimes the lower end of the ureter is so thickened and contracted that the trigone is distorted, causing considerable difficulty in locating the opening of the ureter.

In the majority of cases the cystoscopic appearance of the bladder not only points to the kidney involved but is also an index to the amount of involvement.

Usually we should avoid catheterizing the ureter of the healthy kidney. If indigo-carmin is given intravenously, it will usually be seen to appear from the normal kidney in 4 or 5 minutes, while a much longer time will elapse before the appearance from the diseased side. If then a larger ureteral catheter is passed into the diseased ureter, the cystoscope removed, and a small rubber catheter is passed into the bladder, the difference in the number of pus cells and the specific gravity of the specimen collected will often locate the lesion.

The tuberculosis bladder is always irritable and frequent cystoscopy with local anaesthesia is impossible. Spinal anaesthesia is very helpful in these cases.

Radiographic shadows in tuberculosis of the kidneys are caused by the deposit of lime salts in caseated areas. The irregularity in their contour and density are in sharp contrast to the clear-cut picture usually produced by stone.

Pyelography should only be used when the diagnosis is in doubt. In such instances it is very helpful. Diffuse cortical involvement often causes irregular contractions of the pelvis. When the pelvis is invaded, the outline is uneven. The

calyces are dilated and the borders appear ragged. If there are communicating cartical lesions, they will appear as irregular shadows, detached or communicating by a narrow line. The ureter will often appear tortuous with areas of constriction and dilatation. In complete caseation there may be a shadow outlining the complete case of the kidney.

Observation at the Mayo Clinic shows that in about one in five patients X-ray is helpful in establishing the diagnosis.

In dealing with these cases we should realize that they are tuberculous patients and patients with tuberculous kidneys. They should have the same constitutional treatment that is afforded those suffering with tuberculosis of any other organ. In addition to this, the treatment is nephrectomy in unilateral involvement, and also in bilateral involvement when one kidney is slightly infected and with good function, while the other kidney is far advanced in disease and causing septic symptoms.

Some authorities believe that tuberculous lesions of the kidney at times heal just as they do in the lung, but we have no positive proof that they ever heal spontaneously after they become far enough advanced to cause symptoms. Dr. George Dock of St. Louis, after an exhaustive study of the literature, concluded that the possibility of spontaneous healing of tuberculosis of the kidney must be admitted, but could not be looked for as probable. He noted the observations of Simmons who found, in an experience of 200 autopsies, that one-third of cases of genitourinary tuberculosis died of miliary or meningeal tuberculosis, and that 50% of men dying of tuberculous meningitis had genitourinary tuberculosis.

Dr. E. L. Young, Boston, after a similar study concluded that the healing of the tuberculous focus in the kidney was impossible. He mentions 3 cases reported by Keyes, in which there was a remission of from 2 to 17 years. In the case, with the longest remission, autopsy showed the kidney to be entirely destroyed. The other 2 patients had a flare-up and the kidney was removed. These authors were able to find very few cases reported cured by nonoperative means. The largest number was reported by Sardoe. There were 21 cases treated by tuberculin—five of which appeared cured. He did not consider the proof complete, however, because of the possibility of remissions.

Dr. Braasch has found from observing complete post-operative data on 435 cases on whom nephrectomy had been done, that the late mortality within 5 years is 25% with failure, completely, to cure 20%, giving prognosis of recovery of 80% and complete cure 60%. It is also interesting to note in his observations, patients presenting evidence of healed pulmonary tuberculosis give highest percentage of complete recoveries which seems an evidence of greater resistance.

## THE ROLE AND RATIONALE OF ORAL FOCAL INFECTION\*

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Anyone reviewing the medical and dental literature of the past fifteen years can but be awed by the role that focal infection plays as an etiological factor of primary importance in the causation of varied systemic and organic disease.

I shall confine my remarks to oral focal infection, choosing the term oral, advisedly because we as dentists should consider the entire oral cavity as our field. This includes the tongue, cheeks, lips, paradental, peridental tissues and the teeth. You will find in current literature the term "dental" in reference to oral focal infection, when paradental and peridental tissues are the nidi of sepsis as well as the teeth themselves.

*Classification of Foci.*—In order to clarify certain statements which appear in this paper, I shall define a focus of infection as a centre from which pathogenic micro-organisms enter the blood and lymph, or from which they disseminate their toxins. Let us then enumerate the various oral septic foci in order of their pathogenicity:

(1) Teeth with infected pulp canals filled or unfilled, discharging through the root apices into perapical tissues.

(2) Partially erupted or impacted third molars with loose flap of gum tissue overlying them, forming deep pockets, which harbor infection.

(3) Embedded root fragments, bone speculæ or foreign bodies in the alveolar process with definite areas of infection surrounding them.

(4) Periodontoclastic lesions extending to the apical third or apex.

(5) Vincent's infection.

(6) Mild periodontoclasia.

(7) Simple gingivitis.

As potential oral foci we have:

(1) Non-septic pulpless teeth showing rarified periapical areas due to trauma from occlusion or powerful medication. These periapical tissues have little resistance and may become the seat of metastasis from some other focus of infection.

(2) Teeth with large fillings encroaching upon the pulp may through trauma, thermal changes or infection cause degeneration and death of the pulp, putrefaction and infection ensuing.

(3) Teeth bearing faulty restorations, such as: crowns, bridges, fillings with overhanging gingival margins. Any of these may in time produce sufficient irritation to cause adjacent tissues to become infected.

*Immunity.*—When we accept the fact that a septic focus is of primary importance as an etiological factor in the causation of disease, and when we enumerate the many active and potential foci that the oral cavity may harbor; and going further we admit that one of these foci or maybe all are to be found in the average adult oral cavity—we wonder we are alive. What then should we do with our patients? Do as some radical men suggest? Extract all suspicious teeth and if periodontal disease is general, then all of the teeth? Too much of this has already been done. Let us be more reasonable. Surely some kind providence is protecting us. This kind providence must of necessity be *immunity*. For brevity sake, let us not analyze this term "immunity" as we could debate all evening on same. Suffice it to say that it can be inherent or acquired.

*Mycology.*—The microorganisms that are chiefly responsible for the host of infectious diseases of focal origin are the various strains of streptococci. The "strep" is a versatile little fellow, endowed under certain conditions with the power of mutation. Rosenow has transmuted streptococci into pneumococci and vice versa. Perhaps it is capable of further mutation, who knows? Admitting that we do not know all about the "strep" and admitting that we have immunity and phagocytes, why not spend more

\*Read before the joint meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society and the Northwest District Dental Society, Chattahoochee, Oct. 11, 1928.

time in making a diagnosis that we may have less to repent?

*Present Means of Diagnosis.*—It is a simple matter for the trained dentist to diagnose the different infections of the soft tissues. By careful objective and digital examination, and with the aid of a probe all pocket formation can be detected and classified. To diagnose infections that exist within the alveolar process is truly a difficult matter, and yet it is being done daily by simply interpreting radiographic films. Teeth are condemned to extraction or allowed to remain in the jaws according to the judgment of the reader of the film. I know of no more preposterous presumption than that assumed by the average X-ray laboratory when they state that this or that tooth in a set of films shows infection and extraction is advised. A radiogram is only a shadow picture. All it can show us is the density or translucency of the tissues rayed. Roots that curve at abrupt angles or are superimposed may hide a rarified area, and different degrees of density of the alveolar process may appear as sclerotic processes, etc. Even if we could say that all areas of root or bone resorption or rarefaction are disclosed in a set of radiograms, how do we know that these are pathologic areas?

As a matter of fact cultures taken from many of these areas are proven sterile, yet, it is the teeth showing apical rarified areas that are always marked for extraction. How about the radiographically negative tooth? Many a tooth that shows no root canal fillings and appears normal in a radiogram is a pulpless and hopelessly infected tooth, and many teeth testing vital and radiographically negative are infected.

No wonder this complicated problem has made many radical-one-hundred-per-cent-exodontists and consequently many individuals have been deprived of sound, useful parts, or all of the masticatory apparatus, and are wearing artificial makeshifts and incidentally still have their neuritis, rheumatism and what not. Let us concede then that X-ray examination is only an aid in depicting deviation from the normal in texture and density of tissues radiographed.

It is possible in pulpless teeth to gather the contents of suspected root canals and apical rarified areas through the pulp chamber or by surgically opening into periapical areas through the alveolar process and culture same, but how about the infected vital tooth? Unfortunately we can-

not resort to this means as routine examination, and we are forced to tackle the problem from a different angle.

*Rationale of Treatment.*—As stated before, the average adult patient presenting for dental service has one or many suspected oral foci of infection. If we are satisfied that such is the case the patient should be referred to a competent internist for general physical examination, chiefly to ascertain if he is suffering from any of the diseases attributed to focal infection. If he is not, or is only slightly affected, then the next step should be, it seems, to ascertain by blood count, Kauffer and other tests, with what degree of immunity he is endowed. If favorable, then by all means, we should adopt a conservative plan of treatment, i. e., all pulpless teeth should be opened up and root canals made aseptic by therapeutic means; all soft tissue conditions treated; leaky and deep fillings removed, cavities sterilized and teeth refilled; proper prophylactic measures instituted and adhered to and the case kept under observation. If the patient is seriously affected and his resistance poor, then by all means, remove all possible foci in a most radical manner.

*Conclusions.*—That all positive oral septic foci are a serious menace to the individual, and in a lesser degree, yet not to be ignored, are the potential oral foci.

That dental examinations should be more complete and painstaking.

That oral diagnosis is impossible without general physical diagnosis, and that the findings of both examinations should be considered jointly.

That if all of the above conclusions are adhered to the dentist can be of inestimable value to his patient, and can save him in many instances the loss of valuable teeth, of which the best artificial substitutes unfavorably compare with the natural teeth, both in function and in esthetics.

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FOURTEENTH DISTRICT—R. L. KENNEDY, M.D. . . . . Malone  
Calhoun, Jackson, Gulf.  
FIFTEENTH DISTRICT—W. E. VAN LANDINGHAM, M.D.  
Palm Beach, Broward . . . . . West Palm Beach  
SIXTEENTH DISTRICT—W. J. CALVIN, M.D. . . . . Eustis  
Sumter, Lake.  
SEVENTEENTH DISTRICT—L. C. INGRAM, M.D. . . . . Orlando  
Osceola, Orange.  
EIGHTEENTH DISTRICT—DAVID R. KENNEDY, M.D. . . . . Sarasota  
Manatee, Sarasota.  
NINETEENTH DISTRICT—C. H. KIRKPATRICK, M.D. . . . . Arcadia  
DeSoto, Hardee, Highlands.  
TWENTIETH DISTRICT—WILLIAM R. WARREN, M.D. . . . . Key West  
Monroe.  
TWENTY-FIRST DISTRICT—H. D. CLARK, M.D. . . . . Ft. Pierce  
St. Lucie, Okeechobee, Indian River, Martin.

### WOMAN'S AUXILIARY

MRS. G. E. CHANOLER, PRESIDENT . . . . . Miami  
MRS. M. A. LISCHKOFF, VICE-PRESIDENT . . . . . Pensacola  
MRS. ROBT. HARRIS, RECORDING SEC'Y-TREAS. . . . . Miami  
MRS. M. J. FLIPSE, CORRESPONDING SEC'Y . . . . . Miami

## TECHNICAL EXHIBIT

The handling of technical exhibits at our annual meetings has been quite a problem, as it has been impossible to arrange these exhibits in a uniform manner through the local societies, owing to the fact that no uniform regulations have been approved. Each entertaining society, in the past, took over the responsibility for just a single meeting. This practice put the local society at quite a disadvantage, as there was no opportunity to profit by previous experience. Therefore, in many cases, the same mistakes have been made from year to year. No records of the exhibits or exhibitors have been available through the State Association. In some instances, undesirable exhibitors have wedged their way into the exhibit hall. Many requests have been received urging the business office to take over technical exhibits at the annual meetings in the future and that every exhibitor be approved by the American Medical Association or the officers of the State Association. With the approval of the Committee on Arrangements of the St. Johns County Medical Society, the business office will, for the first time, take over all of the exhibits.

# Florida Medical Association, Inc.

JACKSONVILLE, FLORIDA

P. O. BOX 81

SHALER RICHARDSON, M. D.  
SECRETARY-TREASURER AND  
EDITOR OF THE JOURNAL

STEWART G. THOMPSON, D. P. H.  
BUSINESS MANAGER AND  
DIRECTOR OF EXHIBITS

## Regulations Regarding Exhibits

**Arrangement of Exhibits.**—The management will provide skeleton booths as indicated in diagrams, also signs of uniform style. No interference with the light or space of other exhibitors will be allowed.

Exhibitor is responsible for damage to property. No signs or other articles shall be posted, nailed, or otherwise attached to any of the pillars, walls, doors, etc., in such manner as to deface or destroy the same. No attachments can be made to the floors by nails, screws, or any other devices that would in any way damage or mar them. All space leased subject to these restrictions.

**Restrictions.** Exhibits should be confined, as far as practicable, to special articles, articles that are new, unique, or particularly attractive and scientific in character.

No proprietary drugs, chemicals, or therapeutic agents that do not comply with the rules of the Council on Pharmacy and Chemistry of the American Medical Association or which have not been accepted by the Council for inclusion in "New and Non-official Remedies", can be exhibited, distributed, or in any way advertised in the hall. (For copy of official rules of the Council on Pharmacy and Chemistry, write A. M. A.)

No medical journal or publication can be exhibited that contains advertisements of drugs, chemicals, or any therapeutic agents which do not conform to the rules of the Council on Pharmacy and Chemistry of the American Medical Association.

**Irregular Canvassing and Distribution of Advertising Matter.**—Solicitation of business or conferences in the interests of business except by exhibiting firms, is prohibited. Canvassing by exhibitors outside of their booths is also forbidden. Circulars or advertising matter of any description cannot be distributed, excepting from the Exhibitor's booth.

**Exhibits of Electrical and Radiographic Apparatus.**—Machines and apparatus operated by electricity must be shown as "still" exhibits. Practical demonstrations of X-ray apparatus and accessories or of any noisy apparatus of any kind will not be permitted. No objection will be made to the utilization of electricity for illuminating purposes or for operating smaller diagnostic instruments and electro-therapeutic apparatus which are noiseless.

**Subletting of Space.**—No subletting of space will be permitted. Each firm represented in the Exhibit Hall must sign the regular form "Application for Space in the Exhibit Hall." Any person or firm subletting space as well as the one purchasing space, will be subject to eviction. No refund will be made for space reserved.

**Uncontrollable Eventualities.**—The Florida Medical Association, Inc., will take all reasonable precautions against damage or loss by fire, water, storm, theft, strikes and other emergencies of that character, but does not guarantee or insure the Exhibitor against loss by reason thereof.

**Cooperation of Exhibitor Requested.**—The foregoing regulations with reference to exhibits have been formulated for the best interests of exhibitors and the hearty cooperation of our patrons is requested. All points not covered are subject to settlement by the management.

Space is leased with the understanding that the Exhibitor will hold the Florida Medical Association, Inc., harmless from any or all liability which results from any cause whatsoever within the control of said exhibitor.

(OVER)

## Application for Space in the Technical Exhibit

At the Fifty-Sixth Annual Meeting  
of  
Florida Medical Association, Inc.

Alcazar Hotel  
St. Augustine

April 2nd and 3rd, 1929

FLORIDA MEDICAL ASSOCIATION, INC.

Box 81

Jacksonville, Florida

You are hereby authorized to reserve for our use space in the Technical Exhibit at the Alcazar Hotel for the Fifty-Sixth Annual Meeting of the Florida Medical Association, Inc., April, 1929.

Our First Choice is Space No. \_\_\_\_\_; at \$ \_\_\_\_\_

Our Second Choice is Space No. \_\_\_\_\_; at \$ \_\_\_\_\_

Our Third Choice is Space No. \_\_\_\_\_; at \$ \_\_\_\_\_

Our Fourth Choice is Space No. \_\_\_\_\_; at \$ \_\_\_\_\_

Our Fifth Choice is Space No. \_\_\_\_\_; at \$ \_\_\_\_\_

(Make five selections. Space will be assigned in the order in which contracts are received.)

**TERMS**—Fifty per cent of contract price to accompany this order and the balance to be paid on or before March 1, 1929.

(Firm Name) \_\_\_\_\_

(Per) \_\_\_\_\_

(Address) \_\_\_\_\_

(Name of Person in Charge of Exhibit) \_\_\_\_\_

(Print here two-line copy for your identification Sign.)

(Sign Painter's Copy)

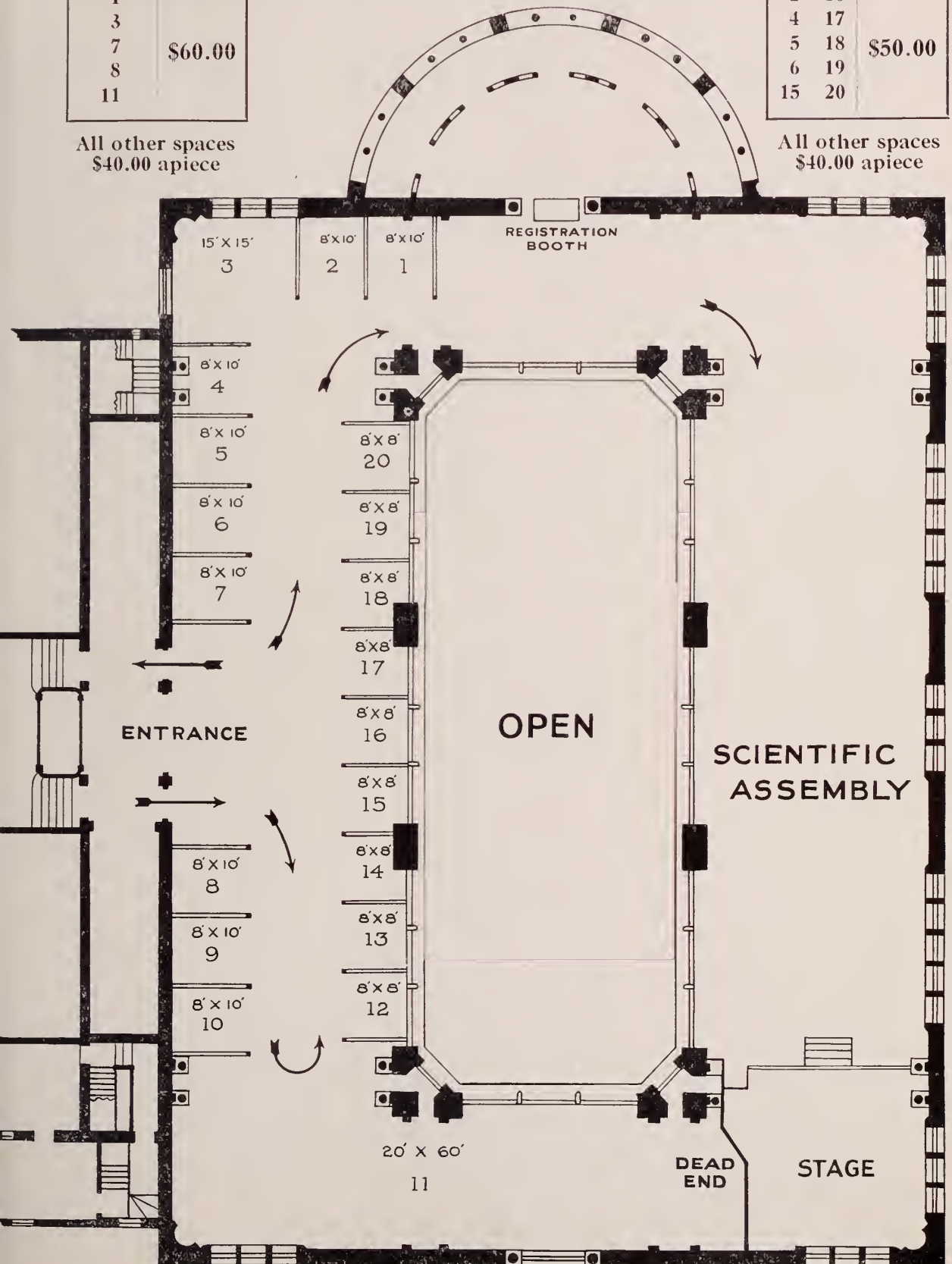
# SCHEDULE OF SPACES AND PRICES ST. AUGUSTINE, 1929

SPACES	PRICE
1	\$60.00
3	
7	
8	
11	

All other spaces  
\$40.00 apiece

SPACES		PRICE
2	16	\$50.00
4	17	
5	18	
6	19	
15	20	

All other spaces  
\$40.00 apiece



(OVER)



# MEMBERSHIP ROSTER FLORIDA MEDICAL ASSOCIATION, INC.

## CALENDAR YEAR 1928

### ALACHUA COUNTY MEDICAL SOCIETY

Depass, Matthew H., President,  
E. University Ave. .... Gainesville  
Whitlock, W. E., Vice-  
Pres. .... High Springs  
Floyd, G. M., Second Vice-  
Pres. .... Hawthorne  
Summerlin, J. L., Sec.-Treas.,  
1 Baird Bldg. .... Gainesville  
Biggs, E. L. .... Starke  
Dell, James M., 333 W. Main  
St., S. .... Gainesville  
Getzen, S. P. .... Newberry  
Goode, Jesse A., Box  
541 .... Alachua  
Gray, C. R. .... Trenton  
Haskell, Lyman G., University  
of Florida .... Gainesville  
Hodges, James H., P. O. Box  
508 .... Gainesville  
King, T. Byron, 332 W. University  
Ave. .... Gainesville  
Lassiter, Wilburn .... Gainesville  
Parks, Walker B. .... Starke  
Preston, H. F. .... Melrose  
Pridgeon, C. L. .... Waldo  
Rice, Samuel D., 124 E. University  
Ave. .... Gainesville  
Smith, DeWitt T., 331 W. University  
Ave. .... Gainesville  
Snow, Thomas A. .... Gainesville  
Thomas, W. C. .... Gainesville  
Tillman, George C., 431 W.  
University Ave. .... Gainesville  
Trice, Spencer T., Ware Hospital  
and Clinic .... Seminole, Okla.  
Twiggs, J. H. .... Archer  
Weeks, L. R. .... Trenton  
Weeks, P. D. .... High Springs  
Willis, J. M. .... Williston  
Young, William C. .... Chiefland

### BAY COUNTY MEDICAL SOCIETY

Lee, W. J., President .... Panama City  
Adams, D. M., Sec.-Treas., 505  
Fifth St. .... Panama City  
Blackshear, W. J. .... Panama City  
McGehee ....  
Nixon, James M. .... Panama City  
Raborn, John D., P. O. Box  
133 .... Shamrock  
Whitfield, J. M. .... Panama City

### BRADFORD COUNTY MEDICAL SOCIETY

Kinr, Seeber, Sec.-  
Treas. .... Lake Butler  
Maines, John E. .... Lake Butler  
Mann, John M. .... Lake Butler  
Middleton, William E. .... Starke

### BREVARD COUNTY MEDICAL SOCIETY

Bean, I. F., President  
..... Melbourne  
Hardman, W. W., Vice-Pres., care  
Bellevue Hospital, New York, N. Y.  
Hicks, I. K., Sec.-Treas. .... Melbourne  
Counts, Noah T. .... Cocoa  
Creel, W. J. .... Eau Gallie  
Hughlett, William S. .... Cocoa  
Page, Walter C., 317 Delannoy  
Ave. .... Cocoa  
Rose, John R. .... Titusville  
Stevens, H. J. .... Titusville  
White, Charles B. .... Cocoa  
Wood, George W. .... Rockledge

### BROWARD COUNTY MEDICAL SOCIETY

Stanford, John A., President, 205 First  
Nat'l. Bank Bldg. .... Ft. Lauderdale  
Butler, B. F., Vice-  
Pres. .... Hollywood  
Robinson, Leigh F., Sec.-Treas., 403 1st  
Nat'l. Bank Bldg. .... Ft. Lauderdale  
Brown, Oliver C., 411 1st National  
Bank Bldg. .... Ft. Lauderdale  
Carter, Donald E., 915 1st National  
Bank Bldg. .... Ft. Lauderdale  
Darrow, Anna E., 310 S. E. 7th  
St. .... Ft. Lauderdale  
Hendricks, Elliott M., 311 1st National  
Bank Bldg. .... Ft. Lauderdale  
Johnston, John A., Oliver  
Bldg. .... Ft. Lauderdale  
Klussman, Henry A., 1st National  
Bank Bldg. .... Ft. Lauderdale

Klussman, Richard M., 1st National  
Bank Bldg. .... Ft. Lauderdale  
Lingeman, Ralph B., 915 1st National  
Bank Bldg. .... Ft. Lauderdale  
Lowry, Robert S., 544 S. E. 6th  
Ave. .... Ft. Lauderdale  
McClellan, George S. .... Pompano  
McLaury, Elbert, 214-220 1st National  
Bank Bldg. .... Hollywood  
Maxwell, Leslie H., 915 1st National  
Bank Bldg. .... Ft. Lauderdale  
Peavy, Henry J., 505 1st National  
Bank Bldg. .... Ft. Lauderdale  
Repass, Robert E., Cor. Lincoln Rd.  
& Wash. Ave. .... Miami Beach  
Roper, Luther E., 2014 21st  
Ave. .... Hollywood  
Skiff, Francis S., 303 1st National  
Bank Bldg. .... Ft. Lauderdale  
Stovall, R. H., 1st National Bank  
Bldg. .... Ft. Lauderdale  
Walker, Harrison A., 214-220 1st  
National Bank Bldg. .... Hollywood  
\*Wiig, C. J., .... Ft. Lauderdale  
Winsor, Sanford A., City  
Pharmacy .... Pompano

### COLUMBIA COUNTY MEDICAL SOCIETY

Bates, Thomas H., President,  
Blanche Hotel Annex .... Lake City  
Arnold, L. J., Vice-  
Pres. .... Lake City  
Farnell, Perry C., Sec.-Treas., 24 N.  
Marion St. .... Lake City  
Anderson, Leonidas M., P. O. Box  
No 7 .... Lake City  
\*Black, Irby A. .... Lake City  
Caldwell, Herbert .... Lake City  
Dyer, James H. .... Lake City  
Gable, J. D. .... Lake City  
Harkness, Robert B., 605 E.  
Duval St. .... Lake City  
Rogers, A. E. .... Lake City  
Witt, T. W. .... Lake City

### DADE COUNTY MEDICAL SOCIETY

Jones, Walter C., Jr., President, 409  
Calumet Bldg. .... Miami  
Adkins, E. H., Vice-Pres., 608  
Huntington Bldg. .... Miami  
Harris, Robertson M., Secretary, 1001  
Huntington Bldg. .... Miami  
Dunaway, Carl E., Treasurer,  
Box 723 .... Miami  
Agos, Isadore H., 410 Huntington  
Bldg. .... Miami  
Allen, Omer F., Professional  
Bldg. .... Miami  
Aronovitz, Samuel, Professional  
Bldg. .... Miami  
Babcock, Donald T., Calumet  
Bldg. .... Miami  
Babcock, Henry C., 414 Calumet  
Bldg. .... Miami  
Baker, Juel M., 312-14 Seybold  
Bldg. .... Miami  
Baker, L. A., 576 W. Flagler St., Miami  
Barfield, J. O., 312 N. W. Third  
Ave. .... Miami  
Barge, H. A., 405 Calumet Bldg., Miami  
Barge, W. J., 405 Calumet Bldg., Miami  
Benton, George H., 1503 Pizarro  
St. .... Coral Gables  
Bertram, Albert J., 46 N. W. 1st  
St. .... Miami  
Bullard, Clifton P., 215 Seybold  
Bldg. .... Miami  
Burch, R. N., 2827 N. Miami  
Ave. .... Miami  
Carter, A. C., Huntington Bldg., Miami  
Chambers, Silas E., 403 Huntington  
Bldg. .... Miami  
Chandler, G. E., Huntington  
Bldg. .... Miami  
Claxton, W. A., care Oklawaha  
Sanatorium .... Jacksonville, Ill.  
Cleghorn, Charles D., Ralston  
Bldg. .... Miami  
Conger, George D., 2164 N. W.  
28th St. .... Miami  
Coplan, Milton M., 601 Huntington  
Bldg. .... Miami  
Couric, Edmonson S., P. O. Box  
265 .... Lemon City, Miami  
Davis, Harle F., 1st National  
Bank Bldg. .... Miami  
DeBoe, Michael P., 1st National  
Bank Bldg. .... Miami

Dodge, Percy L., 812 Huntington  
Bldg. .... Miami  
DuPuis, J. G., .... Lemon City, Miami  
Eckman, Benjamin F., .... Homestead  
Edwards, S. R., Allison  
Hospital .... Miami Beach  
Elder, Samuel F., Huntington  
Bldg. .... Miami  
Elgin, Lee W., 508 Huntington  
Bldg. .... Miami  
Ellis, William H., 15 N. E. 11th  
St. .... Miami  
Flipse, Matthew J., 306 Huntington  
Bldg. .... Miami  
Fox, H. H., Box  
601 .... Miami  
Freeman, Mary .... Perrine  
French, Elmo D., 603 Huntington  
Bldg. .... Miami  
Gbertler, Max, 1715 S. W., 11th  
St. .... Miami  
Goodson, W. M., Box  
1272 .... Miami  
Gowdy, Francis A., 120-21 Shoreland  
Arcade .... Miami  
Gowdy, Ralph A., Olympia Bldg., Miami  
Graves, J. Raymond, 309 Huntington  
Bldg. .... Miami  
Grimes, Dewey H., Box  
377 .... South Miami  
Haggard, William A., 502 Security  
Bldg. .... Miami  
Haisfield, Harry B., 2005 N. Miami  
Ave. .... Miami  
Hall, E. J., 201 Venetian Bldg., Miami  
Hall, Thomas B., Aladdin  
Bldg. .... Miami Beach  
Harris, David W., 502 Professional  
Bldg. .... Miami  
Hart, O. J., Tampa Municipal  
Hospital .... Tampa  
Hatch, Ernest B., 71 N. E. 11th  
St. .... Miami  
Hodsdon, Benjamin F., 418-20  
Security Bldg. .... Miami  
Hodsdon, L. A., 601 N. E. First  
Ave. .... Miami  
Holmes, A. G., Box 2012 .... Miami  
Holmes, R. J., 601 Huntington  
Bldg. .... Miami  
Hotchkiss, W. T., Aladdin  
Bldg. .... Miami Beach  
Hutson, Thomas W., 309 Huntington  
Bldg. .... Miami  
Jeffrey, S. L., 4022 Douglas  
Road .... Miami  
Jenkins, Leslie M., 1661 W. Flagler  
St. .... Miami  
Jenkins, Paul K., 506 Collins  
Ave. .... Miami Beach  
Jordan, W. B. .... Homestead  
Keeler, Frank L., P. O. Box  
1250 .... Miami  
Keely, J., 161 N. E. 2nd St. .... Miami  
Kemp, A. J., Congress Bldg., ... Miami  
Kennon, Charles L., 411-12 Huntington  
Bldg. .... Miami  
Kirsch, Maxwell D., 410 Huntington  
Bldg. .... Miami  
Kitchens, F. E., 132 Ave.  
Minorca .... Coral Gables  
Leavitt, H. A., 127 N. E. 5th S., Miami  
Lefholz, R., P. O. Box 85, Coral Gables  
Lewis, Taylor, Congress Bldg., ... Miami  
Light, S. D. W., Calumet Bldg., Miami  
Lithgow, William D., 245 N. E.  
25th St. .... Miami  
Litter, Ammon B., 608 Huntington  
Bldg. .... Miami  
Lott, Young C., 144 N. E. 2nd  
Ave. .... Miami  
Lucinian, Joseph H., 403 Huntington  
Bldg. .... Miami  
Luke, J. M. J., Congress Bldg., ... Miami  
Lustgarten, A., 144 N. E. 2nd  
Ave. .... Miami  
Lyell, Robert O., 305-10 Huntington  
Bldg. .... Miami  
MacDonell, George N., care Division  
of Health .... Miami  
McGnagle, J. E., 1885 W. Flagler  
St. .... Miami  
McKenzie, E. N., Calumet Bldg., Miami  
McKenzie, J. S., Box 575, ... Bradenton  
McKenzie, O. G., Calumet Bldg., Miami  
McKibben, William W., 205 Calumet  
Bldg. .... Miami  
Manson, Plumer J., Rosetta Theatre  
Bldg. .... Little River

Marsh, Lucille Johnson, 704  
Professional Bldg. .... Miami  
Martin, M. C., 548 W. Flagler  
St. .... Miami  
Maxwell, E. B., Gowdy Clinic. .... Miami  
Medlin, Willard B., 502 Security  
Bldg. .... Miami  
Milton, J. D., 306 Exchange  
Bldg. .... Miami  
Moore, Alfred ..... Kendall  
Moss, William H., Flagler  
Arcade ..... Miami  
Newell, C. E., 21 S. W. 12th Ave.,  
..... Miami  
Nichol, E. Sterling, 306 Huntington  
Bldg. .... Miami  
O'Quinn, Leon H. .... Hialeah  
Palmer, B. H., 502 Huntington  
Bldg. .... Miami  
Panettiere, Cayetano, Aladdin  
Bldg. .... Miami Beach  
Payne, J. W., 2622 S. W. 8th St., Miami  
Payton, Frazier J., Allison  
Hospital ..... Miami Beach  
Pearson, Homer L., Jr., 610  
Huntington Bldg. .... Miami  
Pearson, Nelson T., 1st National  
Bank Bldg. .... Miami  
Pearson, Rufus J., 210 E. Flagler  
St. .... Miami  
Peters, Edgar, 506 Olympia Bldg.,  
..... Miami  
Phillips, Kenneth, 120-21 Shoreland  
Arcade ..... Miami  
Quillian, Warren, Coral Gables  
Clinic ..... Coral Gables  
Raap, Gerard, 809 Huntington  
Bldg. .... Miami  
Roche, Charles F., Aladdin Bldg.,  
..... Miami Beach  
Ryan, William B., Jr., 206-7 Karp  
Bldg. .... Coral Gables  
Sayles, C. F., 312 N. W. 3rd  
Ave. .... Miami  
Shaw, E. Clay, 508 Huntington  
Bldg. .... Miami  
Shisler, J. W., 205 Shoreland  
Arcade ..... Miami  
Simmons, John A., 408 Huntington  
Bldg. .... Miami  
Simpson, J. R., 1051 Seybold  
Bldg. .... Miami  
Sinclair, J. A. B., 1603 N. E. Second  
Ave. .... Miami  
Skaggs, P. T., Box 615. .... Miami  
Smith, C. Kirby, 210 E. Flagler  
St. .... Miami  
Smith, J. W., 1760 N. W. 5th St., Miami  
Smith, M., 405-6 Huntington Bldg.,  
..... Miami  
Snyder, John W., 402 Huntington  
Bldg. .... Miami  
Spiegel, A., Fifth Avenue Hospital  
..... New York City, N. Y.  
Stewart, J. S., 1049 Seybold Bldg.,  
..... Miami  
Stuart, J. D., 127 N. E. 5th St., Miami  
Tallman, Maurice H., 312 Venetian  
Arcade ..... Miami  
Thomas, Edwin C., 45 N. E. 5th  
St. .... Miami  
Thomas, Kelly C., 330 N. W. 1st  
St. .... Miami  
Thomas, Merrick D., 330 N. W. 1st  
St. .... Miami  
Threlkeld, Major E., 109 N. E. 6th  
St. .... Miami  
Tumlin, Corbett E., 203 Townley  
Bldg. .... Miami  
Turner, John C., Tatum Bldg. .... Miami  
Vinson, Willie J., 120 Shoreland  
Arcade ..... Miami  
Vogt, Ferdinand A., 207 Calumet  
Bldg. .... Miami  
Walters, Arthur L., 337 Lincoln  
Road ..... Miami Beach  
Watters, W. H., Boston-Miami Clinic,  
P. O. Drawer H. .... Coconut Grove  
Weiland, A. H., 227 Aragon  
Ave. .... Coral Gables  
Welch, P. B., 227 Aragon  
Ave. .... Coral Gables  
Westermann, Julius T., P. O. Box  
1542 ..... Buena Vista Sta., Miami  
Whitaker, Joel, 905 Congress  
Bldg. .... Miami  
White, David W., 337 Lincoln  
Road ..... Miami Beach  
Whitten, Benjamin L., Box 505, Miami  
Wilson, M. C., 606 Huntington  
Bldg. .... Miami  
Wood, Arthur W., 416 Security  
Bldg. .... Miami

Woodard, Robert C., 203 Venetian  
Arcade ..... Miami  
Yarborough, Henry C., 812 N. Biscayne  
Blvd. .... Miami  
Youmans, I. C., Professional  
Bldg. .... Miami

#### DE SOTO-HARDEE-HIGHLANDS MEDICAL SOCIETY

Weems, Howard V., President,  
22 Oak St. .... Sebring  
Poucher, Allen A., Vice-  
Pres. .... Wauchula  
Kirkpatrick, Charles H., Sec-  
Treas., Box 454 ..... Arcadia  
Aurin, E. C. .... Ft. Ogden  
Bevis, Henry P. .... Arcadia  
Chandler, Isaac W., First Trust  
Bldg. .... Avon Park  
Crum, M. L. .... Arcadia  
Garner, John E. .... Wauchula  
Highsmith, G. F. .... Arcadia  
Hubert, Marion A. .... Sebring  
Kayton, M. C. .... Wauchula  
McSwain, D. L. .... Arcadia  
Mitchell, John W. .... Sebring  
Pyatt, Wesley S. .... Bowling Green  
Touchton, W. C. .... Avon Park  
Witt, C. C. .... Arcadia

#### DUVAL COUNTY MEDICAL SOCIETY

Driskell, Simon E., President,  
St. James Bldg. .... Jacksonville  
Jelks, Edward, Vice-Pres.,  
Riverside Hospital ..... Jacksonville  
Morris, Kenneth A., Secretary,  
Professional Bldg. .... Jacksonville  
Shaw, W. McL., Treasurer,  
St. James Bldg. .... Jacksonville  
Adams, George E., 6620 Buffalo  
Ave. .... Jacksonville  
Adams, Thomas S., 5 Main  
St. .... Jacksonville  
Alford, Neil, St. James  
Bldg. .... Jacksonville  
Arms, B. L., State Board of  
Health ..... Jacksonville  
Bacon, Henry, 2737 Vernon  
Terrace ..... Jacksonville  
Baker, R. M., Professional  
Bldg. .... Jacksonville  
Baker, W. J. .... Eastport  
Barfield, Frederick G., St. James  
Bldg. .... Jacksonville  
Baumgartner, Carl J., 406 Masonic  
Bldg. .... Jacksonville  
Bayless, W. C., 203 St. James  
Bldg. .... Jacksonville  
Beals, J. A., Riverside  
Hospital ..... Jacksonville  
Beckman, George E., Professional  
Bldg. .... Jacksonville  
Black, J. B., St. James  
Bldg. .... Jacksonville  
Blackmar, Ray W., 319-321 St. James  
Bldg. .... Jacksonville  
Blinn, T. A., St. James  
Bldg. .... Jacksonville  
Boone, J. L., 520 Professional  
Bldg. .... Jacksonville  
Bowen, Frederick J., St. James  
Bldg. .... Jacksonville  
Boyd, John E., 342 St. James  
Bldg. .... Jacksonville  
Bransford, L. E., Professional  
Bldg. .... Jacksonville  
Brewster, W. A. .... Callahan  
Brillhart, H. L., Graham  
Bldg. .... Jacksonville  
Brink, F. A., 502 King St., Jacksonville  
Brinson, P. A. .... Baldwin  
Brinson, W. D. .... Baldwin  
Broadbent, O. P., St. James  
Bldg. .... Jacksonville  
Buckman, Thomas E., 2708 St. Johns  
Ave. .... Jacksonville  
Carefoot, E. I., Professional  
Bldg. .... Jacksonville  
Carradine, J. H. .... Lawtey  
Cason, Turner Z., 2033 Riverside  
Ave. .... Jacksonville  
Chapman, Benjamin A., 348 St. James  
Bldg. .... Jacksonville  
Chilli, Joseph L., 318 St. James  
Bldg. .... Jacksonville  
Collins, C. C., St. James  
Bldg. .... Jacksonville  
Copeland, Silas M., 203 St. James  
Bldg. .... Jacksonville  
Copp, F. A., 458 St. James  
Bldg. .... Jacksonville  
Counts, H. W., Peninsular Cas.  
Bldg. .... Jacksonville

Croft, Theo. G., St. James  
Bldg. .... Jacksonville  
Cunningham, Lester W., St. James  
Bldg. .... Jacksonville  
Day, Gaston, St. James  
Bldg. .... Jacksonville  
Dean, Russell, St. James  
Bldg. .... Jacksonville  
Drew, Horace R., St. James  
Bldg. .... Jacksonville  
Enneis, F. B., Professional  
Bldg. .... Jacksonville  
Erwin, Stanley, 724 Lynch  
Bldg. .... Jacksonville  
Faver, Robert M. .... Lake Geneva  
Field, Thomas S., 712 Laura  
St. .... Jacksonville  
Fisher, L. C. .... Green Cove Springs  
Fort, Frank L., Professional  
Bldg. .... Jacksonville  
Furnish, Richard D., 452 St. James  
Bldg. .... Jacksonville  
Gammon, Julian E., 700 Professional  
Bldg. .... Jacksonville  
Goethe, James E., St. Johns  
Park ..... Jacksonville  
Goodale, Banks H., St. James  
Bldg. .... Jacksonville  
Gorman, John M., 424 St. James  
Bldg. .... Jacksonville  
Greene, Ralph N., 1022 Park  
St. .... Jacksonville  
Gwinn, Van Henry, 2585 Riverside  
Ave. .... Jacksonville  
Harrell, D. E., St. James  
Bldg. .... Jacksonville  
Harris, Herrman H., 608 Greenleaf &  
Crosby Bldg. .... Jacksonville  
Harris, W. G., St. James  
Bldg. .... Jacksonville  
Hartman, James H., 546 Lomax  
St. .... Jacksonville  
Harwell, D. F., Peninsular Cas.  
Bldg. .... Jacksonville  
Heggie, N. M., 33-36 Buckman  
Bldg. .... Jacksonville  
Henson, Graham E., 201 St. James  
Bldg. .... Jacksonville  
Herlong, M. B., 211 St. James  
Bldg. .... Jacksonville  
Hodges, John W., 3rd & Grace  
Sts. .... Richmond, Va.  
Holden, Gerry R., 1022 Park  
St. .... Jacksonville  
Holloway, Luther W., 359 St. James  
Bldg. .... Jacksonville  
Horne, Hendley F., St. James  
Bldg. .... Jacksonville  
Humphreys, David G. .... Fernandina  
Ira, Gordon H., 2311 Post  
St. .... Jacksonville  
Ives, H. A., 711 Rosselle St.,  
..... Jacksonville  
Jennings, C. L., Professional  
Bldg. .... Jacksonville  
Johnston, Crowell W., 404 St. James  
Bldg. .... Jacksonville  
Jones, F. C., Graham Bldg., Jacksonville  
Keising, Frederick C., 315 Professional  
Bldg. .... Jacksonville  
Key, Foster P., .... Green Cove Springs  
Killinger, Raymond R., St. James  
Bldg. .... Jacksonville  
Kirby-Smith, Joseph L., 511-15 Green-  
leaf & Crosby Bldg., Jacksonville  
Kirk, William W., 608 Greenleaf &  
Crosby Bldg. .... Jacksonville  
Knauer, W. J., Buckman  
Bldg. .... Jacksonville  
Knight, A. Comer, Professional  
Bldg. .... Jacksonville  
Krueger, Frederick W., 452 St. James  
Bldg. .... Jacksonville  
\*Lane, R. Y. .... Orange Park  
Limbaugh, Louie M., 458 St. James  
Bldg. .... Jacksonville  
Love, J. D., 2063 Oak St., Jacksonville  
McEuen, Harry B., 320 Professional  
Bldg. .... Jacksonville  
McGinnis, Robert H., 2063 Oak  
St. .... Jacksonville  
McIver, Robert B., St. James  
Bldg. .... Jacksonville  
McKenzie, A. C., St. James  
Bldg. .... Jacksonville  
Mabry, C. B., St. James  
Bldg. .... Jacksonville  
Maines, John E., Jr., 331½ W.  
University Ave. .... Gainesville  
Manhoff, Ben, 712 Laura St.,  
..... Jacksonville  
Manning, William S., St. James  
Bldg. .... Jacksonville



Martin, P. H., Professional Bldg. .... Jacksonville  
 May, R. D., Professional Bldg. .... Jacksonville  
 Milam, Ernest B., 1022 Park St. .... Jacksonville  
 Mitchell, George M., 712 Laura St. .... Jacksonville  
 Mitchell, J. W., St. Lukes Hospital .... Jacksonville  
 Moe, Leonard N., 212 St. James Bldg. .... Jacksonville  
 Morgan, Thomas E., 4th Floor St. James Bldg. .... Jacksonville  
 Morris, S. A., 237 W. Duval St. .... Jacksonville  
 Norris, Samuel R., 1022 Park St. .... Jacksonville  
 Norwood, J. K., 211 St. James Bldg. .... Jacksonville  
 Oetjen, G. F., St. James Bldg. .... Jacksonville  
 Owens, J. H., 147 W. 12th St. .... Jacksonville  
 Parramore, James B., 322 St. James Bldg. .... Jacksonville  
 Pasco, J. D., 1022 Park St. .... Jacksonville  
 Peterson, C. A., St. James Bldg. .... Jacksonville  
 Peyton, Harry A., 2033 Riverside Ave. .... Jacksonville  
 Porter, H. W., 348 St. James Bldg. .... Jacksonville  
 Proctor, Harper L., 210 Professional Bldg. .... Jacksonville  
 Ramage, Raymond B., 219-20 Professional Bldg. .... Jacksonville  
 Randolph, J. H., St. James Bldg. .... Jacksonville  
 Reaves, H. A., Professional Bldg. .... Jacksonville  
 Richards, Ferdinand, Professional Bldg. .... Jacksonville  
 Richardson, George W., 343 St. James Bldg. .... Jacksonville  
 Richardson, Shaler, 111 W. Adams St. .... Jacksonville  
 Rollins, Clarence D., 2162 Riverside Ave. .... Jacksonville  
 Ross, W. E., St. James Bldg. .... Jacksonville  
 Sanderson, Raymond, 216 Professional Bldg. .... Jacksonville  
 Sandusky, C. M., 28 W. Monroe St. .... Jacksonville  
 Schnauss, William R., 312 Hildebrandt Bldg. .... Jacksonville  
 Schneider, David, Greenleaf & Crosby Bldg. .... Jacksonville  
 Sellers, E. T., 412-413 St. James Bldg. .... Jacksonville  
 Sengstak, Ernest P. E., Mandarin Simpson, James K., 712 Laura St. .... Jacksonville  
 Skipper, C. T., St. James Bldg. .... Jacksonville  
 Smith, Ralph E., 112 Julia St. .... Jacksonville  
 Stollenwerck, A. D., 25 W. Beaver St. .... Jacksonville  
 Swift, Edwin C., 2237 Herschell St. .... Jacksonville  
 Taylor, H. M., 111 W. Adams St. .... Jacksonville  
 Teeter, Edmund H., 305 St. James Bldg. .... Jacksonville  
 Thomas, Robert Y. H., 502 Lynch Bldg. .... Jacksonville  
 Thompson, David C., 2579 Herschell St. .... Jacksonville  
 Thompson, T. C., 318 Hildebrandt Bldg. .... Jacksonville  
 Tyler, Lockland V., Atlantic Blvd. & Kings Road .... South Jacksonville  
 Upchurch, Noble A., City Board of Health .... Jacksonville  
 Van Schaick, Harold D., St. James Bldg. .... Jacksonville  
 Veal, Ernest W., 128 St. Johns Ave. .... South Jacksonville  
 Waas, F. J., Professional Bldg. .... Jacksonville  
 Washburn, Clayton D., St. James Bldg. .... Jacksonville  
 West, Charles O., Brotherhood Block .... Kansas City, Kansas  
 Wilcox, Clarence R., 712 Laura St. .... Jacksonville  
 Wilkinson, Albert H., 313 Professional Bldg. .... Jacksonville  
 Williams, R. H., Punta Gorda  
 Wilson, Alpheus K., 334 St. James Bldg. .... Jacksonville

Wilson, J. F., 1308 Willow Branch .... Jacksonville  
 Woolsey, Bertram F., 319 St. James Bldg. .... Jacksonville  
 Wynn, Robert S., 305 Consolidated Bldg. .... Jacksonville

#### ESCAMBIA COUNTY MEDICAL SOCIETY

D'Alemherte, Clinton W., President, 311 Blount Bldg. .... Pensacola  
 Pollock, Wm. A. J., Jr., Vice-Pres., 303 Theisen Bldg. .... Pensacola  
 Hoffman, James M., Sec.-Treas., Pensacola Hospital .... Pensacola  
 Ames, Allen M., 206 Blount Bldg. .... Pensacola  
 Anderson, Warren E., 511 Am. Natl. Bank Bldg. .... Pensacola  
 Bell, John D., 607 Blount Bldg. .... Pensacola  
 Bickerstaff, James H., Blount Bldg. .... Pensacola  
 Bryans, H. L., 21½ E. Wright St. .... Pensacola  
 Bryans, R. L., 23 E. Wright St. .... Pensacola  
 Carter, John H., 312 Brent Bldg. .... Pensacola  
 Dewberry, W. C., Theisen Bldg. .... Pensacola  
 Dodson, M. W., Munson Fellows, J. H., Brent Bldg. .... Pensacola  
 Gachet, Neely L., Century Haisfield, Abram R., Blount Bldg. .... Pensacola  
 Heinberg, Charles J., Pensacola  
 Hixon, F. P., Pensacola  
 Holley, John C., Milton Hutchinson, C. E., 303 Blount Bldg. .... Pensacola  
 Johnson, J. R., Blount Bldg. .... Pensacola  
 Lischkoff, Mozart A., Blount Bldg. .... Pensacola  
 Mixon, J. A., Box 697, Pensacola  
 Nobles, R. G., Blount Bldg. .... Pensacola  
 Nobles, V. R., Blount Bldg. .... Pensacola  
 Nobles, W. D., Pensacola  
 Payne, W. C., Blount Bldg. .... Pensacola  
 Peel, George T., Brent Bldg., Pensacola  
 Pierpont, Juriah H., 511 Amer. Bank Bldg. .... Pensacola  
 Quina, M. E., Pensacola  
 Renshaw, F. G., 104 S. Palafox St. .... Pensacola  
 Simpson, Horace L., 303 Theisen Bldg. .... Pensacola  
 Stokes, Thomas H., Theisen Bldg. .... Pensacola  
 Sullivan, Rosa L., 2181 Shipyard Ave. .... Pensacola  
 Thames, Rufus, Milton  
 Turberville, John S., Century  
 Turner, John B., Bagdad  
 Webb, Carol C., 303 Blount Bldg. .... Pensacola

#### HAMILTON COUNTY MEDICAL SOCIETY

Corbett, J. H., President .... Jasper  
 Bruce, John R., Vice-Pres. .... Jasper  
 Barnett, R. A., Sec.-Treas., .... White Springs

#### HILLSBORO COUNTY MEDICAL SOCIETY

Hubbard, Roscoe C., President, 2220 7th Ave. .... Tampa  
 Beyer, A. R., Vice-Pres., Box 474 .... Tampa  
 Barker, Frank T., Sec.-Treas., 302 Krause Bldg. .... Tampa  
 Adamson, William P., 610 Citizens Bank Bldg. .... Tampa  
 Allen, Bundy, 302 Citizens Bank Bldg. .... Tampa  
 Alsobrook, John W., 120 N. Collins St. .... Plant City  
 Andrews, Chadbourne A., 715 Citizens Bank Bldg. .... Tampa  
 Baldwin, R. E., 817 Citizens Bank Bldg. .... Tampa  
 Bartlett, Charles W., Jr., 1521 7th Ave. .... Tampa  
 Bidwell, Alfred M., 401 First National Bank Bldg. .... Tampa  
 Bitzer, Emory W., 815 Citizens Bank Bldg. .... Tampa  
 Black, Robert C., 101 San Ever St. .... Plant City  
 Blackman, H. J., Citizens Bank Bldg. .... Tampa

Blake, W. C., 412 Citizens Bank Bldg. .... Tampa  
 Bottari, Giulio C., 1820½ Seventh Ave. .... Tampa  
 Butchart, T. R., 112 N. Boulevard .... Tampa  
 Byrd, Hiram, 2931 E. Grand Ave. .... Detroit, Mich.  
 Carlton, Leland F., 805 Citizens Bank Bldg. .... Tampa  
 Carter, E. F., 1719 Grand Central Ave. .... Tampa  
 Chandler, J. C., Citrus Exchange Bldg. .... Tampa  
 Christian, George R., 200 Krause Bldg. .... Tampa  
 Clark, W. F., 2102 E. Broadway, Tampa  
 Cook, George L., 906 S. Rome Ave. .... Tampa  
 Cook, H. M., 309 E. Ross Ave., Tampa  
 Cowart, James T., 906 S. Rome Ave. .... Tampa  
 Crum, James W., 412 Stovall Nelson Bldg. .... Tampa  
 Daniels, Benjamin A., 608 Tampa St. .... Tampa  
 Dickinson, Joshua C., 302 Citizens Bank Bldg. .... Tampa  
 Draper, Arthur D., 5607 Florida Ave. .... Tampa  
 Duke, R. R., 708 Citizens Bank Bldg. .... Tampa  
 Duncan, William P., 201 Krause Bldg. .... Tampa  
 Dyer, Walter H., 1801½ 22nd St., .... Tampa  
 Edwards, W. E., Safety Harbor  
 Efrid, Lester J., 509 Stovall Bldg. .... Tampa  
 Ely, R. A., 404½ Zack St., .... Tampa  
 Estes, J. L., 815 First Natl. Bank Bldg. .... Tampa  
 Farrior, Joseph B., 605 Citizens Bank Bldg. .... Tampa  
 Farrior, L. B., 201 Krause Bldg., Tampa  
 Faver, Henry M., 402 Citrus Exchange Bldg. .... Tampa  
 Fluker, Carl B., Box 105, .... Tampa  
 Forbes, Sherman B., 469 Citizens Bank Bldg. .... Tampa  
 Foster, John C., 1801½ 21st St., Tampa  
 Gale, John S., 5403 Florida Ave., Tampa  
 Gilbert, Elsie, 6508 Central Ave., Tampa  
 Gilmer, Eugene S., 612 Citizens Bank Bldg. .... Tampa  
 Glass, Roscoe E., 914 14th Ave., Tampa  
 Golden, Harold M., R. F. D. No. 1, Box 143 .... Tampa  
 Grantham, James M., 242 Lafayette Arcade .... Tampa  
 Gyland, Stephen P., Stovall Bldg. .... Tampa  
 Hamner, George P., Penney Farms  
 Hampton, H., P. O. Box 2113, .... Tampa  
 Hardy, G. E. W., 818 First Natl. Bank Bldg. .... Tampa  
 Helms, J. S., Citizens Bank Bldg. .... Tampa  
 Henderson, R. P., 613 Citizens Bank Bldg. .... Tampa  
 Higgins, Allen F., 330 Lafayette Arcade .... Tampa  
 Holloway, E. W., 2023½ E. Broadway .... Tampa  
 Hopkins, C. D., 810 S. Fremont Ave. .... Tampa  
 Hopkins, W. B., Citrus Exchange Bldg. .... Tampa  
 Ives, A. C., Hinson Bldg. .... Tampa  
 Jefferson, Rollin, 818 First Natl. Bank Bldg. .... Tampa  
 Jensen, Henry J., 7303 Nebraska Ave. .... Tampa  
 Jobson, A. M. C., 910 First Natl. Bank Bldg. .... Tampa  
 Jones, Augustus B., Jr., 706 Franklin St. .... Tampa  
 Knauf, A. R., 812 Citizens Bank Bldg. .... Tampa  
 Knight, John C., Plant City  
 Lake, Esley T., Box 8968, .... Tampa  
 Lancaster, William J., Box 2856, Tampa  
 Lassman, George, 516½ Franklin St. .... Tampa  
 Lowry, Blackburn W., 408 Citrus Exchange Bldg. .... Tampa  
 McEachern, J. R., Box 1181, .... Tampa  
 McMurray, Henry E., 411 Memorial Highway .... Tampa  
 McRae, E. H., 402 Citrus Exchange Bldg. .... Tampa  
 Maechtle, Everett W., 304 Citizens Bank Bldg. .... Tampa



Maguire, Thomas C., 104 S. Collins St. .... Plant City  
 Maner, George R., 5202 Central Ave. .... Tampa  
 Marney, Charles R., 242 Lafayette Arcade .... Tampa  
 Martin, Douglas D., 906 S. Rome Ave. .... Tampa  
 Meighen, Douglas G., 325 Lafayette Arcade .... Tampa  
 Mills, David A., Box 73, Oracle, Arizona  
 Mills, John H., 910 E. Michigan Ave. .... Tampa  
 Mitchell, L. B., Box 737 .... Tampa  
 Myers, W. C., 2023½ Broadway, Tampa  
 Nelken, Bernard E., 7303 Nebraska Ave. .... Tampa  
 Nelson, Robert G., 712 Citizens Bank Bldg. .... Tampa  
 Oglesby, Charles R., P. O. Drawer E. .... Tampashores  
 Oppenheimer, Louis S., 408 Citizens Bank Bldg. .... Tampa  
 Ortega, Rafael, 1805 15th St., Tampa  
 Pate, Julien C., 1107 First Natl. Bank Bldg. .... Tampa  
 Patterson, William, Citrus Exchange Bldg. .... Tampa  
 Rankin, Grover C., Box 2233 .... Tampa  
 Rector, Lee T., 815 First Natl. Bank Bldg. .... Tampa  
 Rowlett, W. M., Box 603 .... Tampa  
 Rudisill, C. A., First Natl. Bank Bldg. .... Tampa  
 Saxton, J. J., 205 Zack St. .... Tampa  
 Shaver, E. F., 2207½ 7th Ave., Tampa  
 Smith, Burdette, Citrus Exchange Bldg. .... Tampa  
 Smith, H. Mason, 903 Theatre Bldg. .... Tampa  
 Smith, Walton H. Y., City Health Dept. .... Tampa  
 Smoak, Edward, 315 Citizens Bank Bldg. .... Tampa  
 Snow, H. O., 1719 Grand Central Ave. .... Tampa  
 Spengler, Nathaniel L., 903 Tampa Theatre Bldg. .... Tampa  
 Stringer, Sheldon, P. O. Box 162, Tampa  
 Taylor, Joseph W., 706 Franklin St. .... Tampa  
 Thompson, H. O., 5309 Central Ave. .... Tampa  
 Thorpe, Franklyn, 201 Lafayette Arcade .... Tampa  
 Torbett, R. S., 619 Citizens Bank Bldg. .... Tampa  
 Truelsen, Thomas, 706 Franklin St. .... Tampa  
 Vaughn, Cecil, 416 Tampa St., Tampa  
 Weekley, Augustine S., 325 Lafayette Arcade .... Tampa  
 Williams, Horace J., 228 Lafayette Arcade .... Tampa  
 Williams, John W., 201 Lafayette Arcade .... Tampa  
 Winton, M. R., Citrus Exchange Bldg. .... Tampa

#### JACKSON COUNTY MEDICAL SOCIETY

Box, Wilmer C., President...Graceville  
 McKinnon, Daniel A., Vice-Pres. .... Marianna  
 Harrison, C. H., Sec.-Treas., Cottondale  
 Baltzell, N. A. .... Marianna  
 Boothe, W. G. .... Campbellton  
 Burns, M. Q. .... Blountstown  
 Dowling, J. B. .... Alliance  
 Finlay, D. H. .... Blountstown  
 Hodges, G. S. .... Marianna  
 Hudgens, Thomas H. .... Sneads  
 Kennedy, R. L. .... Malone  
 McLeod, John E. .... Cypress  
 McLeod, R. F., P. O. Box 637, Madison  
 Miller, Redden L., Box 186...Graceville  
 Price, C. J. .... Alford  
 Ryals, C. H. .... Grand Ridge

#### LAKE COUNTY MEDICAL SOCIETY

Hannum, M. M., President...Eustis  
 Coupland, James D., Vice-Pres., Eustis  
 Ashton, Wilbur L., Sec.-Treas., Umatilla  
 Calvin, William J., Palm Pharmacy Bldg. .... Eustis  
 Colley, Sanford C. .... Tavares  
 DeVane, W. G. .... Groveland  
 Fenn, Harry T. .... Mount Dora  
 Holland, Howard G., 202 State Bank Bldg. .... Leesburg  
 Loder, Charles H., Palm Pharmacy Bldg. .... Eustis  
 Lott, Walter M. .... Clermont

Morrison, Harry K., 111 N. 4th St. .... Leesburg  
 Toy, Samuel H. .... Umatilla  
 Tyre, C. McK. .... Eustis

#### LEE COUNTY MEDICAL SOCIETY

Longbrake, Guy A., Vice-Pres., 308 2nd St. .... Ft. Myers  
 Jones, H. Quillian, Sec.-Treas., 9 Leon-Sims Bldg. .... Ft. Myers  
 Anderson, J. M. .... Cross City  
 Bostleman, Ernest, 201 Pythian Bldg. .... Ft. Myers  
 Brewer, William A. .... Everglades  
 Grace, William H., 15 Earnhardt Bldg. .... Ft. Myers  
 Harrison, Warren A., Pythian Bldg. .... Ft. Myers  
 Hunter, A. P., 1003 1st St., Ft. Myers  
 Nowling, James C. .... Clewiston  
 Seebold, J. L. .... LaBelle  
 Stone, George S., 2nd and Hendry Sts. .... Ft. Myers  
 Winkler, William B. .... Ft. Myers

#### LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON COUNTY MEDICAL SOCIETY

Palmer, Henry E., President, 408 S. Adams St. .... Tallahassee  
 Barnes, Benjamin F., Vice-Pres. .... River Junction  
 Moor, F. Clifton, Sec.-Treas., Telephone Bldg. .... Tallahassee  
 Beggs, John M., Florida State Hospital .... Chattahoochee  
 Brevard, Ephraim M., Lively Corner .... Tallahassee  
 Brinson, John B., Jr., Dogwood St. .... Monticello  
 Daves, F. E. .... Chattahoochee  
 Davis, Julius C., Jr., 203 Masonic Temple .... Quincy  
 Folmar, James Q., Fla. State Hospital .... Chattahoochee  
 Gainey, J. G. .... Quincy  
 Gardner, O. W. .... Greenshoro  
 Glover, George B. .... Monticello  
 Godard, Robert F., Key Bldg., Quincy  
 Gwynn, G. H., Sr. .... Tallahassee  
 Inman, Joseph C., Jr., Fla. State Hospital .... Chattahoochee  
 Johnston, John K., 111½ S. Monroe St. .... Tallahassee  
 Kendrick, O. G. .... Tallahassee  
 Massey, William W., Davidson Bldg. .... Quincy  
 Pound, J. H. .... Chattahoochee  
 Rhodes, Brice M., 121 E. College Ave. .... Tallahassee  
 \*Robertson, May C., College Infirmary  
 F. S. C. W. .... Tallahassee  
 Sharpe, Anne McF., F. S. C. W. Tallahassee  
 Walker, William H. .... Lamont  
 Weems, George E. .... Apalachicola  
 Wilhoit, Sterling E. .... Quincy  
 Wilkinson, B. A., Telephone Bldg. .... Tallahassee  
 Williams, J. F. .... Monticello

#### MADISON COUNTY MEDICAL SOCIETY

Blalock, Alonzo L., President, Madison  
 \*Lambrecht, S., Vice-Pres., Greenville  
 Davis, George O., Sec.-Treas., Madison  
 Hamrick, B. F. .... Madison  
 Kinsey, Junius P. .... Pinetta  
 Long, E. .... Madison  
 Yates, D. H. .... Madison

#### MANATEE COUNTY MEDICAL SOCIETY

Mason, John F., President, Bradenton  
 Blake, Lowrie W., Vice-Pres., Bradenton  
 Davis, John McM., Sec.-Treas., First Natl. Bank Bldg. .... Bradenton  
 Boling, John R., Christine Roof Memorial Hospital .... Bradenton  
 Brown, J. O. .... Palmetto  
 Bryan, Clarence H., Christine Roof Memorial Hospital .... Bradenton  
 Cowell, E. H., 200 S. 39th St. Philadelphia, Pa.  
 English, A. Q. .... Palmetto  
 Field, Charles H., Box 475, Bradenton  
 Fleming, Claude F., 313 10th St. .... Bradenton  
 Gates, Hubbard, P. O. Box 245 Bradenton  
 Harrison, M. M. .... Palmetto  
 Haygood, James K., 518 15th St. .... Bradenton

Hollingsworth, Samuel G., 451 12th St. .... Bradenton  
 Lancaster, B. M. .... Manatee  
 Larrabee, Charles W., Larrahee Hospital .... Bradenton  
 Leflingwell, John B., First Natl. Bank Bldg. .... Bradenton  
 Luke, J. J. .... Ellenton  
 McCoy, Thomas S., 518 12th St. Bradenton  
 McDuffee, T. M. .... Manatee  
 Overstreet, Ed. J. .... Baxley, Ga.  
 Sporman, MacCrellous P. .... Manatee  
 Withers, G. H., 401 Calumet Bldg. .... Miami

#### MARION COUNTY MEDICAL SOCIETY

Henry, H. W., President, 205 State Bank Bldg. .... New Smyrna  
 Stutts, Baldwin S., Vice-Pres., Anderson Bldg. .... Dunnellon  
 Chalker, James L., Sec.-Treas., 108 S. Magnolia St. .... Ocala  
 Curry, J. F. .... Dunnellon  
 Dozier, Henry C., 9 N. Magnolia St. .... Ocala  
 Ferguson, R. D., Box 802 .... Ocala  
 Freeman, Albert H., Holder Block St. .... Ocala  
 Lane, W. K. .... Ocala  
 Lindner, E. G. .... Ocala  
 Lisk, Percy F. .... Ft. McCoy  
 Martin, I. E. .... Oklawaha  
 Moore, J. N., 210 Professional Bldg. .... Ocala  
 Peek, Eugene G., 104 S. Magnolia St. .... Ocala  
 Slaughter, T. K. .... Oxford  
 Strickland, Edgar E. .... Citra  
 Turner, Smith L. .... Williston  
 Van Engelken, Louis H. .... Ocala  
 Watt, Harry F., Holder Bldg. .... Ocala  
 \*Zoll, Frank C. .... McIntosh

#### MONROE COUNTY MEDICAL SOCIETY

Galey, Harry C., President, 532 Fleming St. .... Key West  
 Keating, William B., Vice-Pres., 627 Eaton St. .... Key West  
 Plummer, George, Sec.-Treas., 504 Simonton St. .... Key West  
 Lowe, Eugene C., 713 Eaton St. .... Key West  
 Pintado, Nilo C., 330 Duval St. .... Key West  
 Warren, William R., 511 Eaton St. .... Key West

#### ORANGE COUNTY MEDICAL SOCIETY

Andrews, Mitchell M., President, Clinic Bldg. .... Orlando  
 Chiles, J. H., Vice-Pres., Orlando  
 Chappell, John R., Sec.-Treas., 15 Autrey Arcade .... Orlando  
 Andrews, Laurin L., Florida Sanitarium .... Orlando  
 Beardall, Harold M., 147 E. Church St. .... Orlando  
 Brinson, H. .... Kissimmee  
 Burks, B. A., 108 E. Park Ave. .... Winter Park  
 Butler, Paul T., 314 State Bank Bldg. .... Orlando  
 Carroll, C. .... Apopka  
 Christ, Calvin D., 11 Lucerne Circle .... Orlando  
 Collins, Charles J., 11 Lucerne Circle .... Orlando  
 Craney, Edward T., Orlando Clinic .... Orlando  
 Davila, J. A., 356 N. Orange Ave. .... Orlando  
 Day, Horace A., Clinic Bldg., Orlando  
 Dodds, William H. .... St. Cloud  
 Edwards, Gaston H., Clinic Bldg. .... Orlando  
 English, David E., 23 E. Livingston Ave. .... Orlando  
 Folsom, Spencer A., 11 Lucerne Circle .... Orlando  
 Ford, James A., Box 1015...Orlando  
 Gardner, J. F. .... Winter Park  
 Geiger, H. S. .... Kissimmee  
 Gray, Frank D., 11 Lucerne Circle .... Orlando  
 Gwynn, Humphrey W., Clinic Bldg. .... Orlando  
 Harms, F. H., 40 N. Orange St. .... Orlando  
 Hoffman, Carl D., 25 Autrey Arcade .... Orlando

Hotard, Roland F., 226 E. Park Ave. .... Winter Park  
 Ingram, L. C. .... Orlando  
 Johnston, Colonel George, 217 E. Amelia .... Orlando  
 Johnston, Hewitt, 11 Lucerne Circle .... Orlando  
 Jones, Allan .... Holopaw  
 Kime, R. R. .... Orlando  
 Lawson, Ben H. .... Winter Garden  
 Lewis, P. M., Rose Bldg. .... Orlando  
 McBride, Thomas E. .... Apopka  
 McElroy, Sylvan, 248 S. Orange Ave. .... Orlando  
 McEwan, John S., Clinic Bldg., Orlando  
 Mallory, Meredith, Clinic Bldg. .... Orlando  
 Marshall, C. J. .... Sanford  
 Neal, Thomas A., 356 N. Orange Ave. .... Orlando  
 Orr, Louis, 11 Lucerne Circle, Orlando  
 Osineup, Gilbert S., 300 E. Colonial Drive .... Orlando  
 Perkins, Herman .... Holopaw  
 Person, W. C., P. O. Box 571, Orlando  
 Pines, John A., Orlando Clinic, Orlando  
 Redding, John L., 9 W. Church St. .... Orlando  
 Rivers, Thomas M. .... Kissimmee  
 Scott, Sam R. .... Ocoee  
 Shellhouse, L. H. .... Ocoee  
 Sinclair, W. E., Clinic Bldg., Orlando  
 Spiers, William H., 209 Clinic Bldg. .... Orlando  
 Summitt, R. E., Box 1804. .... Orlando  
 White, Roland T., 211 S. Rosalind Ave. .... Orlando

#### PALM BEACH COUNTY MEDICAL SOCIETY

Powell, J. A., President, Box 561 .... W. Palm Beach  
 George, W. W., Vice-Pres., 1116 Harvey Bldg. .... W. Palm Beach  
 Fleming, S. W., Sec., 417 Harvey Bldg. .... W. Palm Beach  
 Netto, Lloyd J., Treas., 415 Comeau Bldg. .... W. Palm Beach  
 Arnold, Wilbur O., Box 1735 .... W. Palm Beach  
 Baldwin, R. Henry, Box 3493 .... W. Palm Beach  
 Bazemore, Mary K., 411 33rd St. .... W. Palm Beach  
 Binkley, John F., 1206 Harvey Bldg. .... W. Palm Beach  
 Blair, W. M., 11 McGinley Bldg. .... W. Palm Beach  
 Brantley, Grady H., 811½ Lake Ave. .... Lake Worth  
 Brown, Virginus L., Ft. Valley, Ga.  
 Buck, Wm. J. .... Belle Glade  
 Carlisle, J. L., 307 Harvey Bldg. .... W. Palm Beach  
 Clay, B. S., 1203 Harvey Bldg. .... W. Palm Beach  
 Cooley, Roy O., Box 1735. .... W. Palm Beach  
 Dawson, Geo. M., Box 1836 .... W. Palm Beach  
 Denison, Raymond C., 117 N. J. St. .... Lake Worth  
 Gardner, W. H., Guaranty Bldg. .... W. Palm Beach  
 Gerlach, Earl B., 326 Lakeview Ave. .... W. Palm Beach  
 Gunter, T. D., Box 85, W. Palm Beach  
 Hall, John E., 909 Huntington Bldg. .... Miami  
 Heath, Guy W., 409 Harvey Bldg. .... W. Palm Beach  
 Henry, Gordon F., 303 Citizens Bank Bldg. .... W. Palm Beach  
 Herman, F. Peter, 1007 Harvey Bldg. .... W. Palm Beach  
 Herpel, Frederick K., Good Samaritan Hospital .... W. Palm Beach  
 Jared, Vernon M., State Laboratory Bldg. .... W. Palm Beach  
 Lewis, Gaylord, Guaranty Bldg. .... W. Palm Beach  
 Merrill, C. M., 125 Brazilian Ave. .... Palm Beach  
 Newton, S. B., 168 Sea Breeze Ave. .... Palm Beach  
 Oughterson, Wm. A., Harvey Bldg. .... W. Palm Beach  
 Papot, Grace E., 310 Comeau Bldg. .... W. Palm Beach  
 Peek, Leon A., 119 S. Narcissus St. .... W. Palm Beach  
 Peerv, E. W., 524 Comeau Bldg. .... W. Palm Beach  
 Pittman, J. H. .... W. Palm Beach

Richardson, J. C., 409 Independence Trust Bldg. .... Charlotte, N. C.  
 Rodrick, A. F., 21 Baker St. .... Beverly, Mass.  
 Sayad, William Y., 1215 Harvey Bldg. .... W. Palm Beach  
 Schliffli, O. F. .... W. Palm Beach  
 Shackelford, C. W. .... W. Palm Beach  
 Shackelford, W. L. .... W. Palm Beach  
 Smart, B. F. .... W. Palm Beach  
 Sory, B. B., Jr. .... Lake Worth  
 Stone, Valc D., 411 Comeau Bldg. .... W. Palm Beach  
 Van Landingham, Wm. E., Box 758 .... W. Palm Beach  
 Webb, Roy, Box 1105. .... W. Palm Beach  
 Whitman, Frank S., 511 Comeau Bldg. .... W. Palm Beach  
 Wilson, Martha .... W. Palm Beach

#### PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY

Dame, Geo. A., President, 115 Main St. .... Inverness  
 Hancock, Wm. S., Jr., Vice-Pres. Murphy Bldg. .... Brooksville  
 Sistrunk, Robt. D., Vice-Pres. .... Dade City  
 Jackson, Thos. F., Sec.-Treas. Box 241 .... Dade City  
 Bradshaw, J. T. .... Lake Jovita  
 Cannon, Augustus B. .... Lacoochee  
 Coogler, A. C. .... Brooksville  
 Creekmore, Geo. R. .... Brooksville  
 Furlow, L. T. .... Brooksville  
 Hudson, P. J. .... Crystal River  
 MacGregor, Geo. G. .... Bethlehem, N. H.  
 McLeod, Thomas .... Lacoochee  
 Miller, J. F. .... Inverness  
 Moon, Wm. B. .... Crystal River

#### PINELLAS COUNTY MEDICAL SOCIETY

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 Wade, Hugh W., Vice-Pres., 809 First Natl. Bank Bldg. .... St. Petersburg  
 Winchester, Harold E., Vice-Pres. .... Dunedin  
 Feaster, Orion O., Sec., Power & Light Bldg. .... St. Petersburg  
 Post, Wm. G., Jr., Treas., Power & Light Bldg. .... St. Petersburg  
 Aber, A. H. .... St. Petersburg  
 Albaugh, Andrew P. .... Tarpon Springs  
 Anderson, Wm. D., Box 53 .... Largo  
 Bieker, Annette M., Power & Light Bldg. .... St. Petersburg  
 Bieker, Siegfried B., Power & Light Bldg. .... St. Petersburg  
 Black, M. E. .... Clearwater  
 Brown, Harold O., Coachman Bldg. .... Clearwater  
 Bucknell, Howard .... Upper Saranac, N. Y.  
 Burnette, Elmer W., First Natl. Bank Bldg. .... Tarpon Springs  
 Coll, Hugh J., Medical Arts Bldg. .... St. Petersburg  
 Cooke, H. H., Mayo Clinic .... Rochester, Minn.  
 Cooper, J. H., First Natl. Bank Bldg. .... St. Petersburg  
 Cranford, J. F., 512 First Natl. Bank Bldg. .... St. Petersburg  
 Davies, Ray, Huntington Hotel .... Pasadena, Cal.  
 Davis, W. M., 342 1st Ave. N. .... St. Petersburg  
 Dawson, S. A., 105 Medical Arts Bldg. .... St. Petersburg  
 Dickerson, Lucien B., Williamson Bldg. .... Clearwater  
 Echard, T. B., First Natl. Bank Bldg. .... St. Petersburg  
 Fisk, Harley B., 914 West Coast Title Bldg. .... St. Petersburg  
 Funk, Neil E., 401 First Natl. Bank Bldg. .... St. Petersburg  
 Gable, Linwood M., 803 First Natl. Bank Bldg. .... St. Petersburg  
 Gable, Nonie Worth, 807 First Natl. Bank Bldg. .... St. Petersburg  
 Griffin, Thos. R., Power & Light Bldg. .... St. Petersburg  
 Groves, W. H. .... Clearwater  
 Harden, W. W., Smith Bldg. .... St. Petersburg  
 Hardenbergh, John A., Sta. A., Box 305 .... St. Petersburg  
 Harris, Charlton S. .... Clearwater  
 Heibner, Eugene A., 820½ Central Ave. .... St. Petersburg

Herring, John A., 801 First Natl. Bank Bldg. .... St. Petersburg  
 Hooper, C. A., Route 1, Box 512 .... St. Petersburg  
 Hudson, Arthur T., 212 First Natl. Bank Bldg. .... St. Petersburg  
 Jennings, Frank S., 149 Second St., N. .... St. Petersburg  
 Kaufman, Frank E., Coachman Bldg. .... Clearwater  
 Knowlton, R. H., Power & Light Bldg. .... St. Petersburg  
 Kumm, F. F., First Natl. Bank Bldg. .... St. Petersburg  
 Lambdin, L., Box 1805, St. Petersburg  
 Leith, Richard B., 214 Medical Arts Bldg. .... St. Petersburg  
 Lochner, G. M., First Natl. Bank Bldg. .... St. Petersburg  
 Lustig, Emil, 500 Seventh Ave., N. .... St. Petersburg  
 McCallister, Archie, Meres Bldg. .... Tarpon Springs  
 McConnell, Whitman C., 104 Medical Arts Bldg. .... St. Petersburg  
 MacCordy, Earl C., Medical Arts Bldg. .... St. Petersburg  
 Marr, Norval M., Power & Light Bldg. .... St. Petersburg  
 Mease, John A., Virginia Ave., Dunedin  
 Melville, Edmond J., 335 Third Ave., N. .... St. Petersburg  
 Michell, Norman E. .... Clearwater  
 Miller, Geo. E., 208 Medical Arts Bldg. .... St. Petersburg  
 Mills, A. L., 806 Power & Light Bldg. .... St. Petersburg  
 Moeller, Maximilian W., 525 First Ave., N. .... St. Petersburg  
 Murphy, Ralph D., Box 82 .... St. Petersburg  
 Nettles, Robbins .... Clearwater  
 Nickle, Millen A., 503 Coachman Bldg. .... Clearwater  
 O'Brien, Raymond K., E. 105 Fifth Ave., N. .... St. Petersburg  
 Osgood, G. E., Big Bayou .... St. Petersburg  
 Palmer, Harrison G., 7419 Kercheval Ave. .... Detroit, Mich.  
 Peabody, J. D., Box 24, St. Petersburg  
 Pierce, L. H., J. Bruce Smith Bldg. .... St. Petersburg  
 Prather, B. T., First Natl. Bank Bldg. .... St. Petersburg  
 Quicksall, Wm. E., 222 Taylor Arcade .... St. Petersburg  
 Remington, Alvah C., 304 West Ave. .... Rochester, N. Y.  
 Rieger, O. Paul, 333 Third St., N. .... St. Petersburg  
 Roope, A. P. .... Columbus, Ind.  
 Rudolph, Council C., 801 First Natl. Bank Bldg. .... St. Petersburg  
 Ruff, Joseph F., Bank of Clearwater Bldg. .... Clearwater  
 Sackett, Harry R., 1027 15th Ave., N. .... St. Petersburg  
 Sarven, James D., 701 Power & Light Bldg. .... St. Petersburg  
 Simcox, Lawrence, 213 Third Ave., N. .... St. Petersburg  
 Solomon, H. D., Power & Light Bldg. .... St. Petersburg  
 Strickland, Jesse A., Power & Light Bldg. .... St. Petersburg  
 Stuart, M. H., 814 First Natl. Bank Bldg. .... St. Petersburg  
 Timberlake, Gideon, Times Bldg. .... St. Petersburg  
 Townsend, Shell H., Mangun, Okla.  
 Welch, Harry C., 934 Beach Drive .... St. Petersburg  
 White, Benjamin L., First Natl. Bank Bldg. .... St. Petersburg  
 Whitford, Grace R. .... Ozone  
 Williams, Carl A., Box 975 .... St. Petersburg  
 Wood, Alvin J., First Natl. Bank Bldg. .... St. Petersburg  
 Wylie, LeRoy A., Medical Arts Bldg. .... St. Petersburg

#### POLK COUNTY MEDICAL SOCIETY

Watson, Herman, President, 804 Marble Arcade .... Lakeland  
 Sherman, Wm. E., Vice-Pres., 716 W. Central Ave. .... Winter Haven  
 Overstreet, Geo. C., Sec.-Treas., Marble Arcade .... Lakeland  
 Alexander, Omer R., 25 Bevmer Bldg. .... Winter Haven  
 Besenbruch, Peter W., Orange St. .... Davenport



Bevis, William M., U. S. Veterans' Hospital, Northport, L. I., N. Y.  
 Biddle, Percy D., 227 E. 57th St., New York, N. Y.  
 Carefoot, G. H., Ft. Meade  
 Clark, Samuel A., 802 Marble Arcade, Lakeland  
 Cline, R. L., Lakeland  
 Cordes, Henry B., Jr., Box 84, Frostproof  
 Dickinson, Walter P., Box 1166, Lakeland  
 Eide, A. T., Haines City  
 Elder, Eugene B., Knoxville, Tenn.  
 Farmer, Charles H., City Hall, Lakeland  
 Gilbert, R. E., Winter Haven  
 Griffin, J. D., Polk County Trust Bldg., Lakeland  
 Hargrove, Julian L., Polk County Hospital, Bartow  
 Hughes, Robt. L., 225 E. Main St., Bartow  
 Irons, F. E., Winter Haven  
 Justice, Robert L., State Bank Bldg., Haines City  
 Koon, Alpheus C., 513 W. Lemon, Lakeland  
 Leffers, Richard, Sr., 320 S. Iowa Ave., Lakeland  
 Lester, John Gambill, Marble Arcade, Lakeland  
 Lindsey, Sherrod A., Ft. Meade  
 Love, Cicero W., Marble Arcade, Lakeland  
 Lowry, J. R., Nichols  
 McMurray, E. R., 655 Wilson Ave., Bartow  
 Martin, Emmett E., 152 Seventh St., Haines City  
 Maynard, Benjamin H., 209½ E. Main St., Lakeland  
 Mooty, Ross H., Winter Haven  
 Murphy, C. H., Bartow  
 Murphy, H. K., Polk and Main Sts., Mulberry  
 Oglesby, John McG., 165 N. Broadway, Bartow  
 Pearce, C. C., Mulberry  
 Pennington, B. Y., Lake Wales  
 Ragsdale, V. H., Pierce  
 Richards, H. Mercer, Box 72, Lakeland  
 Roberts, Tenney H., 328 N. Florida Ave., Lakeland  
 Shafer, W. W., Haines City  
 Simmons, Thomas G., Auburndale  
 Simpson, W. T., Winter Haven  
 Smith, Samuel F., Box 628, Lakeland  
 Stetson, A. G. C., 941 S. Success Ave., Lakeland  
 Sullivan, Raleigh R., 1006 Marble Arcade, Lakeland  
 Tillis, W. L., 215 Marble Arcade, Lakeland  
 Tinkler, B. R., Lake Wales  
 Vassar, T. D., Strand Bldg., Lakeland  
 Weed, Walter A., Morrell Memorial Hospital, Lakeland  
 Wilhoyte, Roy E., Lake Wales  
 Williams, E. L., Ft. Meade  
 Wilson, Cecil H., 145 E. Main, Bartow  
 Wilson, John F., Jr., Spencer Futch Bldg., Lakeland

#### PUTNAM COUNTY MEDICAL SOCIETY

Hosey, John T., President, Palatka  
 Warren, Edmund W., Sec.-Treas., Palatka  
 Brantley, Z., Grandin  
 Ford, Edward W., Crescent City  
 Miller, W. S., Palatka  
 Rosborough, D. Y., Palatka  
 Strong, S. B., Prado 98, Havana, Cuba  
 Woerner, L., Interlachen  
 Youmans, Corren P., 701 Professional Bldg., Miami  
 Zeagler, G. M., Palatka

#### ST. JOHNS COUNTY MEDICAL SOCIETY

Burnette, Wilbur E., President, 118 Bay St., St. Augustine  
 Griffin, James B., Vice-Pres., American Hospital, Guanojuato, Gto, Mexico  
 Irwin, J. M., Secretary, St. Augustine  
 Scruggs, S. A., Treasurer, St. Augustine  
 Estes, Edgar S., 305 First Natl. Bank Bldg., St. Augustine  
 Guy, Walter B., 52 Central Ave., St. Augustine  
 Parkinson, W. N., East Coast Hospital, St. Augustine  
 Potter, George W., East Coast Hospital, St. Augustine

Spencer, J. J., St. Augustine  
 Stanton, Gordon, Hastings  
 Underwood, Arthur W., 16 St. Francis St., St. Augustine  
 Walkup, A. Clark, 116 St. George St., St. Augustine  
 Walton, Milton, Hastings  
 Webb, Walter D., Alcazar Hotel, St. Augustine  
 White, Herbert E., 401 First Natl. Bank Bldg., St. Augustine  
 Worley, S. G., 43 Jefferson Theatre Bldg., St. Augustine

#### ST. LUCIE-OKEECHOBEE-INDIAN RIVER-MARTIN COUNTY MEDICAL SOCIETY

Newnham, J. A., President, Stuart  
 Davis, Claude L., Sec.-Treas., Okeechobee  
 Bishop, J. W., Ft. Pierce  
 Boothe, R. C., Ft. Pierce  
 Clark, H. D., Bank & Trust Bldg., Ft. Pierce  
 Council, Melton D., Arcade Bldg., Ft. Pierce  
 Dunn, Joseph C., Sebring  
 Glidden, C. H., Ft. Pierce  
 Hardie, Grover C., 134½ N. 2nd St., Ft. Pierce  
 Harrell, G. L., Vero Beach  
 Linco, M. J., Okeechobee  
 McDermid, H. C., Okeechobee  
 O'Quinn, Charles A., Venice  
 Parker, J. D., Stuart  
 Whiddon, Lester L., 205 Arcade Bldg., Ft. Pierce

#### SARASOTA COUNTY MEDICAL SOCIETY

Harris, J. E., President, Bank of Sarasota Bldg., Sarasota  
 Metzger, Frank C., Sec.-Treas., 224 Commercial Court, Sarasota  
 Cribbins, Orville H., 224 Commercial Court, Sarasota  
 Griffin, Harold W., 315 Commercial Court, Sarasota  
 Halton, Jack, Sarasota  
 Halton, Joseph, Pineapple Ave., Sarasota  
 Kennedy, David R., First Bank & Trust Bldg., Sarasota  
 Morton, Arthur O., Commercial Court, Sarasota  
 Myers, Nicholas P., Kenansville  
 Nash, H. C., Hamilton, Ontario, Canada  
 Patterson, John C., First Bank & Trust, Sarasota  
 Slocumb, Clyde B., Hartsfield, Ga.  
 Taylor, T. W., Walpole Bldg., Sarasota  
 Wilson, Cullen B., First Bank & Trust Bldg., Sarasota

#### SEMINOLE COUNTY MEDICAL SOCIETY

Selman, G. S., President, Lake View Ave., Sanford  
 Mitchell, Clifford M., Vice-Pres., Sanford  
 Denton, John T., Sec.-Treas., Meisch Bldg., Sanford  
 Knox, A. W., Box 739, Sanford  
 Langley, W. T., Meisch Bldg., Sanford  
 Martin, John W., Box 95, Oviedo  
 Park, Charles L., B. & P. Bldg., Sanford  
 Puleston, Samuel, Brumley-Puleston Bldg., Sanford  
 Robson, James N., P. O. Box 304, Sanford  
 Smith, Henry D., 108½ Park St., Sanford  
 Stevens, Ralph E., 1st and Palm Ave., Sanford  
 Thomas, A. F., Box 176, Titusville  
 Tolar, Julian N., First St., Sanford  
 Vincent, Charles P., Laurens, S. C.

#### SUMTER COUNTY MEDICAL SOCIETY

Mitchell, W. E., Sec.-Treas., P. O. Box 237, Coleman  
 Cherry, H. S., Center Hill  
 Clarke, K. C., Bushnell  
 Wood, S. C., Leesburg

#### SUWANNEE COUNTY MEDICAL SOCIETY

Anderson, T. S., President, Box 127, Live Oak  
 Strickland, Henry M., Vice-Pres., Live Oak

White, W. C., Sec.-Treas., 412 S. Ohio Ave., Live Oak  
 Airth, Henry F., 106 W. Howard St., Live Oak  
 Cline, D. E., Perry  
 Dicks, Reid E., Polk City  
 Price, Joshua M., Aleamar Bldg., Live Oak

#### TAYLOR COUNTY MEDICAL SOCIETY

Ellis, John C., President, Perry  
 Richardson, John R., Vice-Pres., Carbur  
 Greene, Ralph J., Sec.-Treas., Perry  
 Bryan, W. H., Scanlon  
 Culpepper, C. T., Perry  
 Warren, Geo. H., Main St., Perry

#### VOLUSIA COUNTY MEDICAL SOCIETY

Glatzau, L. W., President, Dreka Bldg., DeLand  
 Davis, Joseph B., Vice-Pres., Halifax Dist. Hosp., Daytona Beach  
 Miller, R. L., Sec.-Treas., 148½ S. Beach St., Daytona Beach  
 Bates, Geo. L., 504½ Main St., Daytona Beach  
 Biddle, J. K., 315 Peninsular Drive, Daytona Beach  
 Bohannon, Clyde C., 154 First Ave., Daytona Beach  
 Bouchelle, Louis B., New Smyrna  
 Brown, L. V. L., DeLand  
 Carter, E. A., DeLand  
 Carter, L. A., Bunnell  
 Chandler, J. R., 120 Volusia Ave., Daytona Beach  
 Chowning, W. C., 111 Palmetto St., New Smyrna  
 Clemmer, Chas. A., 913 Main St., Daytona Beach  
 Davis, C. W., 231 Coates St., Daytona Beach  
 Davis, Geo. A., Dreka Bldg., DeLand  
 Dillard, T. H., DeLand  
 Esche, J. P., 315 So. Peninsular Drive, Daytona Beach  
 Farmer, Myron H., 221 Orange Ave., Daytona Beach  
 Fogarty, Joseph N., 220 Magnolia Ave., Daytona Beach  
 Forster, Davis, New Smyrna  
 Genge, Victor P., Daytona Beach  
 Heck, Maurice E., Professional Bldg., Miami  
 Howe, Raymond, 229 N. Ridgewood Ave., Daytona Beach  
 Howe, Roy, 222 Volusia Ave., Daytona Beach  
 Johnson, Joseph L., 135 Canal St., New Smyrna  
 Merryday, H. L., Daytona Beach  
 Munson, Albert S., 110 So. Boulevard, DeLand  
 Myres, Magnus J., 5 P. O. Bldg., Daytona Beach  
 Pay, W. C., 221 W. Rich Ave., DeLand  
 Rawlings, James E., 221 Orange Ave., Daytona Beach  
 Taylor, Joseph E., DeLand  
 Taylor, Wm. H., 118 S. Beach St., Daytona Beach  
 \*Weis, Edmund W., DeLand  
 Wells, J. Ralston, Woolworth Bldg., Daytona Beach  
 West, Hugh, DeLand  
 White, J. Blake, Ormond Beach  
 Williams, W. J., Seville

#### WALTON-OKALOOSA COUNTY MEDICAL SOCIETY

Webb, Edward P., President, City Pharmacy, Crestview  
 Thorpe, E. D., Vice-Pres., DeFuniak Springs  
 Williams, A. G., Sec.-Treas., Lakewood  
 Huggins, E. L., Freeport  
 McGuire, J. J., DeFuniak Springs  
 McSweeney, J. C., DeFuniak Springs  
 Spiers, G. W., Darlington  
 Stephens, S. E., Laurel Hill

#### \*WASHINGTON-HOLMES COUNTY MEDICAL SOCIETY

Harper, W. C., Secretary, Chipley  
 McClure, H. A., Treas., Chipley  
 Fraser, Donald S., Panama City

\* Deceased.  
 † Charter pending.



## STATE NEWS ITEMS

The Duval County Medical Society leads the societies of the State in total paid membership for the calendar year 1928. At the time this Journal goes to press, the records in the business office show 149 members of the Duval County Medical Society having paid their 1928 state dues. For the past two years, Dade County Medical Society has topped the list for the greatest number of members having paid state dues according to the published annual reports. In 1925, however, Duval County Society was first, Hillsboro County Medical Society second, and Dade County Medical Society third. Dr. Wm. McL. Shaw, treasurer of the Duval County Medical Society, has been very enthusiastic in his effort to bring the Duval County Medical Society into first place and unless some back dues for 1928 are received before the middle of March from some of the larger societies, his goal will have been reached.

\* \* \*

The Hillsboro County Medical Society held its annual banquet January 17th. Dr. F. J. Waas was the speaker of the evening and took as his topic "Organized Medicine and the Objectives of the Component Society." Those attending reported a very enjoyable meeting.

## REMER YOUNG LANE

Dr. Remer Young Lane of Orange Park died December 3, 1928. Dr. Lane was born in Emanuel County, Georgia, in 1864. He graduated from the College of Physicians and Surgeons, Baltimore, in 1884. Returning to his home state, he entered practice in Jenkins County where he was a member of the Jenkins County Medical Society. He was the company surgeon of the Georgia & Florida Railway Company for ten years and was also County Physician of Jenkins County for the same period. He later came to Florida and became physician and surgeon for the Moosehaven Home in Orange Park. Dr. Lane shortly before his death affiliated with the Duval County Medical Society and the Florida Medical Association.

The Dade County Medical Society had as its special guests of honor at their annual banquet Friday evening, January 4th, Dr. E. C. Rosenow of the Mayo Clinic, Rochester, Minn., and Dr. F. Peter Herman of West Palm Beach. They presented papers and illustrated cases of great interest.

One remarkable indication of interest in organized medicine is the steadily increasing number of county medical societies showing 100% of members having paid state dues. For the calendar year 1925, only four county medical societies had state dues paid for their entire membership, while in 1927, there were twenty-one fully paid which, as you will note, is five times the former number. The following table indicates the number of societies by years:

Year.	100% Societies.
1925 .....	4
1926 .....	10
1927 .....	21

If you are interested in the names of the societies included in the 100% class, refer to the Journals where the proceedings of the annual meetings are published. 1928 cannot yet be forecast since the secretaries of the different county medical societies have until the first of March to get in their last collections of dues received. Secretaries please take note and see that your society is properly represented in the display which will appear at the Fifty-sixth Annual Meeting at St. Augustine.

\* \* \*

If you wish to use the daylight machine in connection with the scientific program, addresses, etc., please get in touch with Dr. Wm. McL. Shaw who will have a daylight machine at your disposal. Bring the slides you wish to use.

\* \* \*

The annual meeting of the staff of the Duval County Hospital, Jacksonville, was held in the George Washington Hotel, Tuesday evening, January 17th, at 8:30 p. m. The meeting this year was held in the form of a dinner. There were present fifty members of the staff and the executive board, which was presided over by Dr. R. H. McGinnis, vice-president of the staff, in the absence of Dr. John E. Boyd, the president, who was confined to his home on account of illness. Music was furnished throughout the dinner by the George Washington Hotel orchestra under the able direction of Mr. J. B. Lucy. Miss Emily Mai, the talented soloist of the hotel, rendered several vocal selections which were greatly enjoyed. Immediately following the dinner, the meeting was called to order by Dr. McGinnis. Reports of the work done during the year by the various staff departments were read by the attending physicians. The principal speaker was Mr. R. P. Daniel, chairman of the executive board.

Dr. G. C. Tillman of Gainesville was recently elected Chief of Staff of the Alachua County Hospital.

\* \* \*

The quarterly meeting of the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society was held in Tallahassee on January 10th at 3:00 p. m., with Dr. J. C. Davis, of Quincy, presiding.

Most of the scientific program was furnished by a group of Jacksonville physicians who came over for the occasion as guests of the Society. Dr. H. E. Palmer of Tallahassee read a paper on "A Historic Review of the British Lancet."

The attendance included the guests from Jacksonville, Drs. Frederick J. Waas, T. Z. Cason, and W. McL. Shaw, physicians from Thomasville and Bainbridge, Georgia, members of the Society from Tallahassee, Quincy, Chattahoochee, Monticello, Havana and Lamont.

During the scientific session the wives of visiting physicians were tendered a tea by wives of the Tallahassee physicians at the home of Dr. and Mrs. J. Kent Johnston.

Following the afternoon meeting dinner was served to all members, guests and ladies.

The scientific program follows:

1. "The Function of the County Medical Society"—Dr. Frederick J. Waas, President State Association, Jacksonville.

2. "Cardiac Disease in the Syphilitic"—Dr. T. Z. Cason, Jacksonville.

3. "Discovery and Early History of X-ray"—Dr. W. McL. Shaw, Jacksonville.

4. "A Historic Review of the British Lancet"—Dr. H. E. Palmer, Tallahassee.

\* \* \*

At the regular meeting of the Manatee County Medical Society, held January 8th, the following officers were elected to serve for 1929: L. W. Blake, Bradenton, president; M. M. Harrison, Palmetto, vice-president; J. M. Davis, Bradenton, secretary and treasurer.

\* \* \*

Dr. W. S. Nichols has returned to Lake City from Athens, Georgia, and opened an office in that city. Dr. Nichols will limit his practice to eye, ear, nose and throat work.

\* \* \*

Dr. R. E. Dicks, formerly of Dowling Park, announces his removal to Polk City.

\* \* \*

Dr. J. C. Holley of Milton and Miss Lucille Brown of Toccoa, Georgia, were married on November 28th.

Dr. D. S. Fraser, formerly of Bonifay, announces his removal to Panama City.

\* \* \*

The following is the program enjoyed by the members of the Pinellas County Medical Society at a recent meeting of that body:

1. "Disordered Action of the Heart"—Dr. Emil Lustig.

2. "Carcinoma, With Special Reference to Malignancy in Women"—Dr. W. E. Saunders of Des Moines.

Clinical cases:

1. "Open Operation in Fracture of Femur"—Dr. M. W. Moeller.

2. "Case of Cancer of the Tongue"—Dr. L. A. Wylie.

\* \* \*

Madison County Medical Society has the honor of having been the first to send in their 1929 roster. Dr. George O. Davis, the secretary, is evidently on the job.

\* \* \*

The following joined the ranks of Florida physicians by passing the examination given by the State Board of Medical Examiners, November 12 and 13, at Marianna:

Ashley, Kennerly C., Orlando.  
 Barnes, E. M., Ragland, Ala.  
 Couklin, Raymond C., Eustis  
 Edwards, W. F., Chattanooga, Tenn.  
 Foy, Eugene T., Tampa.  
 Gable, N. Wilson, St. Petersburg.  
 Gonzalez, Feliciano, Jacksonville.  
 Hall, Francis M., Tallahassee.  
 Ickstadt, Albert, Jr., care U. S. S. Saratoga.  
 McMichael, J. C., Windermere.  
 Maloney, R. L., McMinnville, Tenn.  
 Marshall, L. R., Miami.  
 Miles, W. G., Chattahoochee.  
 Morgan, Wm. E., Tarpon Springs.  
 Pearson, Richard J., Tampa.  
 Rathbun, G. L., New Windsor, Ill.  
 Reeves, E. E., Miami.  
 Roberts, Earl H., Jacksonville.  
 Rogers, Wieland W., Jacksonville.  
 Roush, Franklin W., St. Petersburg.  
 Sample, A. M., Jr., Philadelphia, Pa.  
 Saunders, J. R., Chattahoochee.  
 Schubert, Frank P., Miami Beach.  
 Simmons, S. J., Jr., Tampa.  
 Snow, John W., Palos, Ala.  
 Torretta, Jos. N., Tampa.  
 Webb, R. L., Jacksonville.  
 Whitaker, Courtland D., Raiford.

\* \* \*

At the regular meeting of the Walton-Ocala County Medical Society, the following officers were elected for the ensuing year: E. L. Huggins, Freeport, president; J. C. McSween, DeFuniak Springs, vice-president, and A. G. Williams, Lakewood, secretary and treasurer.

To the Columbia County Medical Society goes the honor of being the first component society reporting a 100% paid membership for 1929. Columbia County, which has a very "live" organization, is to be congratulated upon this achievement.

\* \* \*

At the December monthly meeting of the Marion County Medical Society, the following officers were elected to serve during 1929: B. S. Stutts, Dunnellon, president; R. D. Ferguson, Ocala, vice-president; Thos. H. Wallis, Ocala, secretary and treasurer.

\* \* \*

The Central Florida Medical Society will meet at Gainesville as guests of the Alachua County Medical Society on February 14th. Dr. E. G. Peek of Ocala is president.

\* \* \*

At the call of our president, Dr. Frederick J. Waas, the officers, committeemen and councilors met in joint session at the Angebilt Hotel, Orlando, Florida, January 28th. At the meeting the councilors' reports were heard from twelve districts, all of which indicated considerable progress in the development of the various county medical societies. Many of the members made long trips to attend this meeting and their advice and counsel at the informal meeting was quite helpful in the discussion of pre-convention problems. The Executive Committee advised concerning the official date which had been set for the 56th annual meeting at St. Augustine and the Scientific Program Committee reviewed all of the applications for places on the scientific program and selected some eighteen most excellent papers which will constitute the scientific program of our annual meeting. The following officers, committeemen and councilors were present:

Waas, Frederick J., President.  
Richardson, Shaler, Sec.-Treas.  
Thompson, Stewart G., Bus. Mgr.  
Anderson, L. M., Lake City.  
Boyd, John E., Jacksonville.  
Christ, C. D., Orlando.  
Dell, J. M., Gainesville.  
Ingram, L. C., Orlando.  
Edwards, G. H., Orlando.  
Harris, H. H., Jacksonville.  
Helms, John S., Tampa.  
Holmes, R. J., Miami.  
Jobson, A. M. C., Tampa.  
Kennedy, D. R., Sarasota.  
Lischkoff, M. A., Pensacola.  
Payne, W. C., Pensacola.  
Potter, G. W., St. Augustine.  
Raap, G., Miami.  
Tillman, G. C., Gainesville.  
Wyllie, L. A., St. Petersburg.

Dr. M. A. Lischkoff has been appointed president of the Pensacola Kiwanis Club for the year 1929.

\* \* \*

The Pasco-Hernando-Citrus County Medical Society held its annual banquet at the Tangerine Hotel, Brooksville, January 10th at 8 p. m. Dr. Geo. A. Dame, Inverness, the retiring president, presided. At this meeting, Dr. T. F. Jackson of Dade City, the president-elect, was installed and made a fine address. The program was in charge of Dr. G. R. Creekmore, Brooksville, and was a well-planned one. The following doctors were present: Dr. James L. Estes, Tampa; Drs. Herman Watson and J. G. Lester, Lakeland; Dr. T. F. Jackson, Dade City; Drs. Geo. A. Dame, J. F. Miller and K. Cross, Inverness; Dr. J. T. Bradshaw, Lake Jovita; Drs. A. C. Coogler, G. R. Creekmore, L. T. Furlow, W. S. Hancock, and W. H. Cox, Brooksville.

\* \* \*

The Orange County Medical Society held its annual banquet January 16th at the Orlando Country Club. The following officers were installed: J. H. Chiles, president; W. H. Spiers, vice-president; J. R. Chappell, secretary, and C. J. Collins, treasurer. C. D. Christ was toastmaster.

\* \* \*

Dr. B. L. Arms, State Health Officer, Jacksonville, recently returned from Washington, D. C., where he attended the influenza conference held under the supervision of the Surgeon General.

\* \* \*

The January 11th meeting of the Pinellas County Medical Society was held at the Dunedin Country Club, Dunedin. Papers were read by Drs. Howard Bucknell, M. E. Black and M. A. Nickle, all of Clearwater. A case report was made by Dr. J. A. Mease, of Dunedin, who exhibited three patients under special treatment.

\* \* \*

The Program Committee of the Association met in Orlando, Monday, January 28th, in conjunction with the pre-convention meeting and reported on having selected eighteen papers for presentation. With the addresses of the orator and the president, these will fill the session time well without limiting discussion, as so often happens when more papers are presented. The number of men offering papers made the task of selection somewhat difficult, but the Committee feels those selected will afford a very interesting and instructive program.



County Society	MEETINGS					Dues Paid.
	Secretary	Date	Time	Place	Luncheon?	
Alachua .....	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	34%
Bay .....	D. M. Adams, M.D., Panama City.					
Bradford .....	Seeber King, M.D., Lake Butler.					
Brevard .....	I. K. Hicks, M.D., Melbourne.	Varies		Varies		
Broward .....	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	
Columbia .....	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		100%
Dade .....	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	
DeSoto-Hardee- Highlands ...	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	
Duval .....	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Duval County Hospital	No.	
Escambia .....	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	
Hamilton .....	R. A. Barnett, M.D., White Springs.					
Hillsboro .....	Frank T. Barker, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	City Hall	No.	
Jackson .....	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake .....	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes.	
Lee .....	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	
Leon-Gadsden- Liberty- Wakulla- Jefferson .....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	
Madison .....	Geo. O. Davis, M.D., Madison.					71%
Manatee .....	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	
Marion .....	Theo. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	
Monroe .....	G. R. Plummer, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	
Orange .....	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	
Pasco- Hernando- Citrus .....	Geo. R. Creekmore, M. D., Brooksville.	2nd Tuesday	8:00 P.M.	Varies	Yes.	
Pinellas .....	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Y. M. C. A. Bldg.	No.	
Polk .....	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam .....	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	
St. Johns .....	J. M. Irwin M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.					
Sarasota .....	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole .....	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		
Sumter .....	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	
Suwannee ....	W. C. White, M.D., Live Oak.					100%
Taylor .....	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	
Volusia .....	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	15%
Walton- Okaloosa ....	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	
*Washington- Holmes .....	W. C. Harper, M.D., Chipley.					

\*Charter pending. NOTE—(Secretaries: Please submit information to complete the above schedule.)

## TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS  
ISSUED MONTHLY BY THE NATIONAL  
TUBERCULOSIS ASSOCIATION

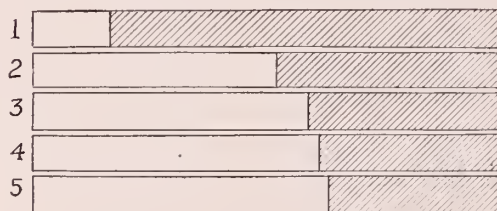
Osler, in his "Practice of Medicine," invariably gave generous space and careful thought to the subheading, "Prophylaxis." The several measures a tuberculosis patient should carry out for his own recovery and for the protection of others are well understood and of obvious purpose. Experience, however, shows that sufficient attention is not yet given to the careful instruction of the patient. There is still evident delay in making a definite diagnosis, delay by the patient in seeking medical advice, delay in deciding to accept treatment, delay in obtaining sanatorium treatment for lack of a bed or other reasons, and insufficient training in health habits looking toward both cure and prevention.

In an effort to ascertain the influence of these several factors, 1,500 patients in sanatoria were personally interviewed by physicians. A brief summary of certain conditions, based on a study of these interviews, is herewith presented.

## TUBERCULOSIS PATIENTS INTERVIEWED.

All the patients interviewed were at least fifteen years of age and all had pulmonary tuberculosis at the time they entered the sanatorium. All but three of the 1,500 patients had consulted from one to fourteen physicians each. The interview covered symptoms of the illness; the reason for

## HOW 1,500 TUBERCULOUS PATIENTS WERE ADVISED BY THEIR PHYSICIANS.



1. 17% were given printed instructions.
2. 53% were told to use only their own dishes.
3. 58% were told how to dispose of sputum.
4. 61% were advised what sleeping arrangements to make.
5. 63% were instructed to sleep alone.

the first consultation of a physician; the various types of physicians (*i. e.*, general practitioner, tuberculosis specialist, throat specialist, tuberculosis clinic physician) consulted by each patient; the extent of the examination given; the resulting

(Continued on page 418)

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diagnosis; the length of time elapsing between the appearance of the first symptom and the first consultation; the first consultation and the diagnosis; the time between the effort to obtain admission to the sanatorium and the actual admission; the number of nursing visits, and numerous other items.

Four questions relating to preventive medicine, to be answered for each physician consulted were asked each patient; namely, "Did physician instruct patient as to disposal of sputum?"—"Use of separate dishes?"—"Washing dishes separately?"—"Sleeping alone?"

#### DISPOSAL OF SPUTUM.

What are patients told about the disposal of sputum? Of the patients who had consulted physicians, 625, or 42 per cent of them, had never been told by any physician how to dispose of their sputum. (Only a small number were physicians or nurses, who were supposed to know what precautionary measures to take.) Of the 871 patients given definite instruction about sputum disposal, 677 first received it from the physician who first told the patient that his illness was tuberculosis, 107 from the second physician, and 24 others by physicians still further removed from the one making the original diagnosis of the patient.

#### CARE OF DISHES.

Only about 53 per cent of the patients were told by any physician consulted that they should keep their dishes apart from those used by other members of their households, and about the same per cent that their dishes should be washed separately.

#### SLEEPING ARRANGEMENTS.

Advice to sleep alone was given to 63 per cent of all patients by some physician, more receiving instruction on this particular point than on any other preventive measure. However, only 61 per cent were advised as to other sleeping arrangements, such as instruction in regard to ventilation, etc. Good sleeping arrangements come under treatment rather than prevention, but the answers to the question regarding them have a bearing on the answers to the question as to sleeping alone. Taken together, they indicate that the thought of preventing infection was not always in the physician's mind when he advised his patient to sleep by himself. Of the 945 patients who were told to sleep alone and of the 919 who received advice

(Continued on page 420)

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as to other sleeping arrangements, 11 per cent and 12 per cent, respectively, were so instructed by a physician seen prior to the one who told the patient that he had tuberculosis.

#### WARNING THE PATIENT WITH SUSPICIOUS SYMPTOMS.

For instruction in preventive measures, prior to telling the patient that he had tuberculosis, two reasons seem apparent. Certain physicians had the welfare of others sufficiently in mind to tell their patients to exercise sanitary precautions even though a diagnosis of tuberculosis was not yet established. Others, and probably the larger number, failed to acquaint the patient with the diagnosis, yet felt impelled to impart a certain amount of public health information.

A fact worthy of comment is that proportionately fewer patients, who were able to have private sanatorium care, had received instruction from their physicians prior to admission, than had those admitted to public sanatoria. This was the case with respect to each one of the items above.

Considering the group as a whole, it was evident that the more advanced the stage of the disease at the time of the patient's first admission to a sanatorium, the more likely he was to have previously received instruction respecting the several preventive measures.

#### EDUCATION AND INSTRUCTION.

Education is perhaps the most effective public health measure for the prevention of tuberculosis. It also is a potent agent of cure. Oral instruction alone is often relied upon to accomplish the education. But the spoken word should be supplemented by written instructions. Most sanatoria provide the patient with a booklet containing the necessary advice and rules of conduct. Some private physicians, realizing the value of printed instructions, supply the new tuberculosis patient with a printed instruction book to guide him.

Each of the 1,500 patients who were interviewed was asked if printed instructions had been given him by any physician consulted, though no attempt was made to go into the detail of such instructions. Seventeen per cent replied in the affirmative. The best record of this score was shown by patients reported by one county sanatorium, 45 per cent of whom had received printed

(Continued on page 422)



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instructions from some physician prior to their admission.

The histories of this group reveal that instruction given to tuberculosis patients by physicians is not especially related to any one factor. Some of the physicians who did give instruction stressed one point to the exclusion of others; some, another. In view of the fact that the average physician sees only a few cases of active tuberculosis in the course of a year, he cannot be expected always to be a perfect instrument for the dissemination of advice to the patient. This study would indicate that the medical profession as a whole gives insufficient thought to the personal instruction of the tuberculosis patient.—*Special Study, National Tuberculosis Association.*

#### THE YEAR IN RETROSPECT.

There has been an immense amount of writing on the subject of tuberculosis during this past year. Interest in diagnosis has been awakened by the Early Diagnosis Campaign, conducted by the tuberculosis associations last spring. Fewer so-called specifics have been brought forth; the question of "helium" tuberculosis is still a matter of dispute as to diagnosis, though not so as to treatment. Ultraviolet ray medication has reached a point where a curb is sadly needed, while the after-care of consumptives by means of work shops, placement organizations, etc., is being recognized as an essential factor in treatment. The interest of the general practitioner in tuberculosis work is apparently on the increase, which in itself is a sign of real progress.—*Progress in Tuberculosis, John B. Hawes, 2nd, M.D., New England Jour. of Med., Nov. 1, 1928.*



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(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)



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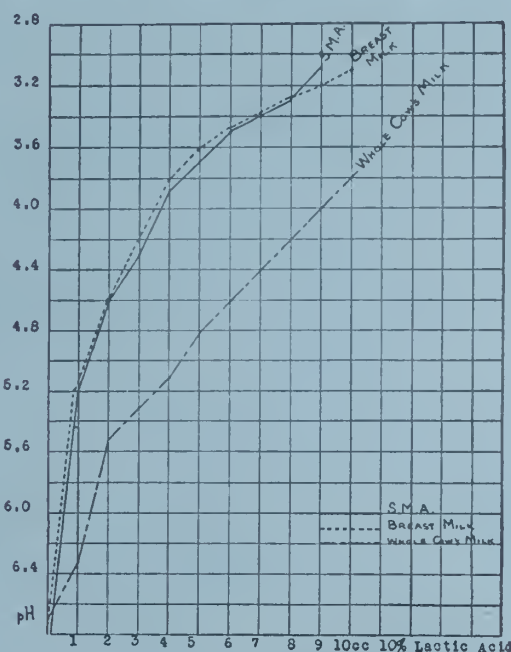
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\*Gold & DeGraff, Jour. A. M. A., March 31, 1928.

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## Florida Medical Association, Inc.

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VOLUME XV  
NO. 9

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### CONTENTS

PAGE	PAGE
Total Cystectomy—Report of Case..... 439 <i>Robert B. McIver, M.D., F.A.C.S., Jacksonville.</i>	Program of the Tenth Annual Meeting of the Florida Railway Surgeons' Association..... 452
Studies on the Etiology of Gastric Ulcer..... 442 <i>Kenneth Phillips, M.D., Miami.</i>	The Honor Guest of the Next Annual Convention... 453
The Diagnosis and Treatment of Acute Gonorrhœa in Women ..... 445 <i>C. W. Shackelford, M.D., West Palm Beach.</i>	Editorials: (1) The St. Augustine Meeting; (2) The House of Delegates ..... 454-455
St. Augustine, the Next Meeting Place of the Florida Medical Association ..... 447	Reports of Councilors, Florida Medical Association 455
Program of the Fifty-Sixth Annual Meeting of the Florida Medical Association, Inc. .... 450	State News Items ..... 460-462
	Schedule of Meetings—Component Societies..... 463
	Tuberculosis Abstracts ..... 464-470

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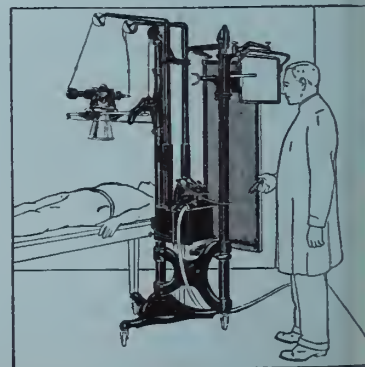
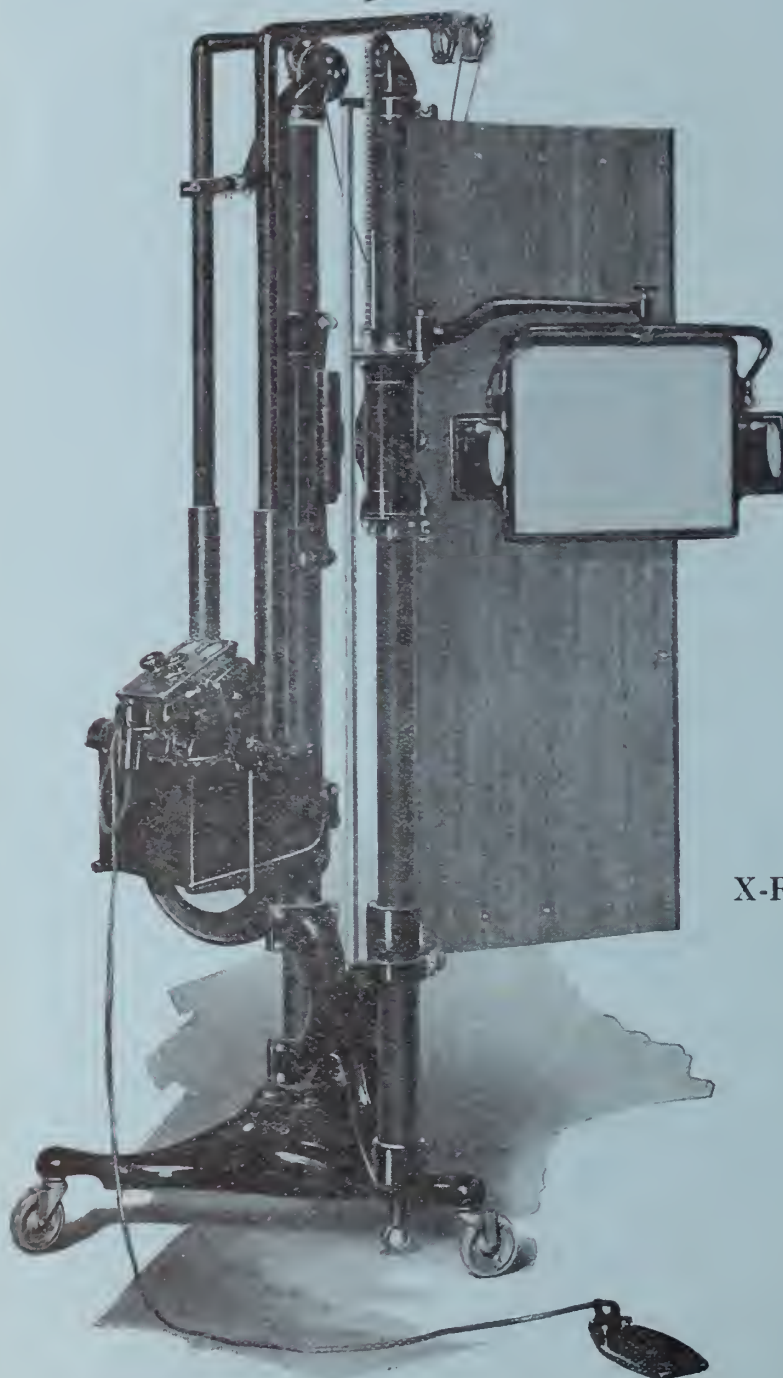
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# to **O** **CULISTS . . .**

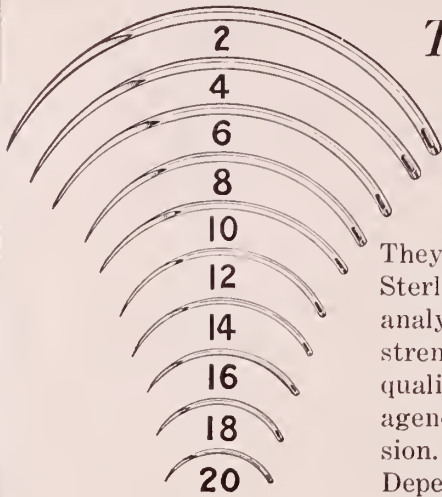
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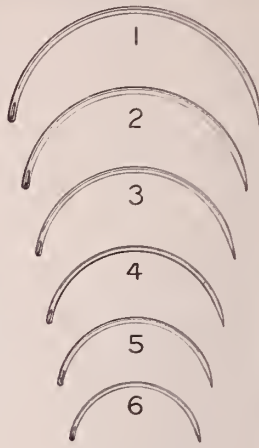
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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume XV

Jacksonville, Florida, March, 1929

Number 9



I X 85

Microscopic Sections Papillary Carcinoma Bladder  
II X 150

III X 350

## TOTAL CYSTECTOMY—REPORT OF CASE\*

ROBERT B. McIVER, M.D., F.A.C.S.,  
Jacksonville.

Mr. President and Members of the Staff:

Cases that are suitable for complete removal of the urinary bladder are infrequently seen. Young, writing in 1928, states that total cystectomy has never been carried out at the Brady Clinic in Baltimore. In cases where the tumor or other pathology is so extensive as to justify the operation, the patient is usually a poor surgical risk, or extension to surrounding organs has taken place or metastasis has occurred. The properly selected case is one where the pathology is so extensive that partial cystectomy would not be possible or effective, where there is no extension through the bladder wall to adjacent structures, where metastasis to the retroperitoneal lymph glands or to other organs has not occurred, and finally, where the patient's condition is good enough, or can be made good enough, for him to withstand several formidable operations. Such a case has recently come under our observation, and we have thought that its report would be of interest.

M. T. J. Referred by Dr. L. R. Weeks, Trenton, Florida. St. Vincent's Hospital:

No. 18017. Adm. 24 Aug., 1928.

Discharged, 31 Aug., 1928. 8 days

No. 18185. Re-adm., 10 Sept., 1928.

Discharged, 10 Nov., 1928. 62 days

Total ..... 70 days

\*Read before the Staff of St. Vincent's Hospital, Jacksonville.

*Admission Diagnosis:* (1) Hematuria, (2) anemia, (3) carcinoma of bladder suspected.

*Final Diagnosis:* (1) Papillomatous epithelioma of bladder, (2) papilloma of bladder, multiple, (3) secondary anemia.

White male, married. Age 50 yrs., occupation, farmer.

*Chief Complaint:* (1) Blood in the urine. Blood passages, (2) painful and frequent urination, (3) loss of weight, (4) loss of strength.

*Present Illness:* Three years ago suffered from bladder trouble, the exact symptoms not being recalled. At that time an operation was performed on the bladder and a "tumorous growth" was found in the organ. This tumor was scraped and the bladder drained; subsequently the wound closed.

About six months prior to admission, patient began to notice a loss of strength in addition to constant urinary symptoms, these latter being chiefly frequency, dysuria and hematuria. The blood varies from a light-red tint to a passage of whole blood and blood clots. A progressive loss of weight has been noticed and in the three months preceding admission, this has amounted to 30 pounds. His family and friends have spoken of his peculiar color, and the patient says this pasty yellow skin is progressive. His family physician refers him for study, diagnosis and treatment.

*Previous medical history:* Negative except as above stated.

*Family history:* Reveals no malignancy in this or preceding generation.

*Physical Examination:* Temperature, 99.6 F.; pulse, 90; respiration, 20. Blood pressure: S. 158; D., 92; P., 66. Weight, es. 99 lbs.

The patient is an adult white male of 50 years, who appears emaciated and presents a profound anemia. The conjunctiva and mucous membranes are very pale; the skin is relaxed and dry; it appears pale and pasty; it has a lemon tint. There is no evident jaundice. The general musculature is flabby. Superficial fat is absent and the normal bony prominences are pronounced. There is no general adenopathy in superficial glands.

Examination of the heart and lungs by Dr. Stanley Erwin is negative for organic pathology, except that a healed lesion at the apex of the right lung is noted.

The eyes, ears, nose and throat are normal.

The abdomen is natural, except that definite thickening is palpable beneath the well-healed suprapubic scar.

External genitalia normal. Rectal examination negative. Bones and joints exhibit no pathology. Both superficial and deep reflexes present and active.

Urine: voided, straw to red, cloudy, acid, 1010 to 1020. 4 plus albumen. Pus +. Blood +++, sugar, neg.

Blood coagulation time, 8 min. Hemoglobin, 15%. Red blood corpuscles, 1,760,000 Color index, 0.8. White blood corpuscles, 3,600. Diff. white blood corpuscles: Sm. L., 19; L. L., 9; L. M., 3; Polys., 66; Eosino, 2; Baso, 1.—100%.

Blood Type II: Wassermann negative.

*Cystoscopy*, 25 Aug., 1928. Local novocain, 4% in urethra. The bladder cavity is occupied by large projecting nodular growth or growths. Ulcerated and bleeding areas are present. The ureteral orifices could not be visualized.

Blood transfusion, 29 Aug., 1928: 600 cc. whole blood—direct method.

Readmitted 10 Sept., 1928.

Hemoglobin, 25%. Red blood corpuscles, 3,-220,000. Coagulation time, 3½ min.

Blood transfusion, 12 Sept., 1928: 750 cc. whole blood—direct method.

Blood transfusion, 17 Sept., 1928. Hemoglobin, 60% (checked). 850 cc. whole blood—direct method.

*Operation*, 19 Sept., 1928. Exploratory laparotomy and transplantation right ureter into rectum. Right rectus incision. General anesthesia, nitrous oxide and ether, Dr. Day; assistants, Dr. Veal and Dr. G. Richardson.

(1) Exploration notes: The liver is normal to inspection and palpation. No nodules or tumors. Gall bladder bluish, thin and empties under pressure. Urinary bladder movable. No infiltration on serous surface. No adhesions to surrounding organs. Contains large mass. No enlarged glands seen or felt in pelvis or along course of large vessels.

(2) Appendectomy—classical technique.

(3) Transplantation right ureter into rectum. Lower right ureter exposed and severed near bladder, distal end being ligated. Right lateral rectal wall incised longitudinally, through serous and muscle coats. Mucous membrane punctured at lower angle this incision, through this the proximal end of severed ureter was carried into rectum and anchored by suture. A No. 12 F. catheter previously placed in ureter was carried out at anus. Anastomosis completed by closing incised edges of outer two rectal coats over the ureter and covering this by an inversion suture line.

(1) Cigarette drain. Closure anatomic.

(Series of lantern slides illustrating technical operative steps).

Following the transplantation of the right ureter there was prompt urine drainage through the catheter which came out at the anus. Reaction was normal, the highest recorded temperature being 100.8, pulse 100, respiration 24. The wound healed kindly.

*Second operation:* 25 September, 1928. Transplantation of left ureter into the sigmoid. Spinal anesthesia, novocaine crystals, 200 m.g. induction at third lumbar interspace. The ureter was exposed intraperitoneal through a left rectus incision. The ureter was then severed close to the bladder and transplanted into the sigmoid by the technique previously stated, except that a catheter could not be used to drain the urine.

Post-operative, the patient became very ill after twenty-four hours, the temperature ranging between 101 and 105, and the pulse between 100 and 150, this condition subsiding by lysis in about five days. During the period of acute reaction, there was pain and tenderness in the region of the left kidney and the organ was definitely enlarged. Edema at the site of the anastomosis causing a temporary block to the outflow of urine was regarded as causative. After an interval during which the patient made a good recovery and following a fourth





Specimen Total Cystectomy  
(Papillary Carcinoma)

blood transfusion, 750 cc. whole blood, he was returned to the surgery for removal of the bladder.

*Third operation:* 8 October, 1928. Spinal anesthesia, novocaine, 200 m.g. Induction—third lumbar interspace. The bladder was exposed through a free midline suprapubic incision and thoroughly mobilized by the intraperitoneal technique. The posterior reflection of the peritoneum was carried wide. Then, by traction on the fundus of the bladder, the pubo-vesical ligaments were exposed and divided. The ureteral stump on each side was pulled forward with the bladder to expose the vesical neck, which was divided close to the prostate gland, and the bladder removed. Bleeding points were carefully ligated and oozing controlled by hot salt packs. The anterior and posterior peritoneal reflections were united by a continuous suture of catgut.

The vesical space was packed lightly with iodoform gauze and one rubber tube drain was placed alongside. The closure was anatomic.

Following this operation, the patient made a good recovery, the highest temperature, 102, pulse, 110, subsided to normal by lysis in seven days. Drainage from the vesical space was profuse for ten days, then becoming scant. The cavity closed rapidly after this time.

On the 23rd of October, a fifth and final blood transfusion was performed, 750 cc. of whole blood being given by the direct method. On October 24th, the patient was up in a chair and after several days was walking, but remained at the hospital for dressings until the 10th of November, when he was discharged home. The weight at this time was 110 pounds. The urine control averaged three and one-half hours during the day and a slightly longer time at night.

#### PATHOLOGIC REPORT.

The specimen is composed of the bladder. The mucosa presents three distinct papillary tumors, the largest of which is 5 c.m. in diameter and the smaller tumors measuring  $2\frac{1}{2}$  c.m. in diameter. The large tumor has a rather broad



base, but section shows little infiltration of bladder wall. The smaller tumors are attached by pedicle.

*Microscopic:* The papillary structures present the same type of tissue. The papillae are covered with several layers of atypical, circular, epithelial cells which are for the most part regular in size and shape. In certain areas, however, there is some anaplasia observed and hyperchromatism of the nuclei of the tumor cells. An occasional mitotic figure is present. The stroma is made up of a loose connective tissue in which are many blood vessels. It is infiltrated with round inflammatory cells. Examination of the base of the pedicle shows some infiltration of the muscle coat by these tumor cells.

*Histo-pathologic diagnosis:* Papillary carcinoma of the bladder.

#### COMMENT.

Analysis of this case indicates vesical papilloma of more than three years' duration, surgically but incompletely treated three years ago, and taking on definite malignant features more than six months prior to admission. It illustrates the rapid physical deterioration that can occur in carcinoma associated with continued blood loss, even though the disease can still be regarded as local. It emphasizes the proneness of vesical papilloma (1) to be multiple, (2) to recur after palliative measures, and (3) to undergo malignant change. Our attention is directed anew to the distinct advantages offered by multiple stage operations in the poor surgical risk.

### STUDIES ON THE ETIOLOGY OF GASTRIC ULCER

KENNETH PHILLIPS, M.D.,  
Miami.

The question of why the stomach does not digest itself, is of recurrent interest to both the biologist and the physician. It is very probable that if we could explain the resistance offered by the normal gastric mucosa to the digestant action of pepsin-hydrochloric acid, we would automatically throw considerable light upon the etiology of gastric and duodenal ulcers.

Despite the number of theories and explanations which have been offered from time to time to account for this resistance, the essential question seems to remain unanswered. Hunter<sup>1</sup> claimed that this resistance was a property of all living uninjured cells; a statement which even to-

day seems to be at least partially true. Pavy<sup>2</sup> believed that the alkalinity of the blood in the gastric tubules prevented the digestion by neutralizing the hydrochloric acid. Katzenstein<sup>3</sup> advanced the theory of an antienzyme contained in the gastric mucosa. Matthes thought that he proved the stomach mucosa to have a special resistance to hydrochloric acid not shared by other tissues. This theory would coincide with the suggestion by Stewart<sup>4</sup> that the various body membranes have developed a specific resistance to the fluids with which they naturally come in contact, but not to other juices. Roux and Rive<sup>5</sup> and Klug<sup>6</sup> suggested that the protective covering of mucous was the important factor.

Regardless of their true explanation, there are several known proven facts which have a bearing upon the problem. It was early discovered that the normal resistance of the stomach wall to gastric digestion rapidly disappears on death of the animal. If the animal was killed, during the height of digestion of a meal, and kept warm, the gastric juice would digest its way through the stomach wall even before the cells of the mucosa and muscularis were dead. The common observation of all pathologists has shown varying degrees of digestion of the gastric or esophageal mucosa. In cases of gastric fistulae where the juice is flowing over the wound area, digestion of tissue is almost constant.

In order to obtain evidence on the question of tissue digestion a series of experiments were devised under the direction of Lester R. Dragstedt of Chicago. Some parts of the work had been previously reported and were carried out for confirmation; other parts were originally devised by the writer and his co-workers.

#### *Resistance of Intestinal Mucosa to Gastric Digestion:*

Normal healthy adult dogs were operated upon in the following manner: a large opening or window (4 by 10 cm.) was made in the anterior wall of the stomach midway between the greater and lesser curvatures, the opening extending to within one (1) inch of the pylorus. This window was then filled with an intestinal flap taken from various levels of the bowel, prepared in the following manner: the intestine was cut across in two places about 12 cm. apart, and the isolated segment with its uninjured blood supply set aside. Continuity of the tract was then re-established by end to end anastomosis.

The isolated segment was then opened by an incision along the entire antimesenteric border and the flap thus produced was stitched into the opening in the stomach, forming in this way a part of the gastric wall and exposing the mucosa of the segment directly to the gastric juice. Special care was taken not to injure the blood supply to the intestinal segment. In these experiments, segments were used from the duodenum, jejunum, ileum and colon. The animals were subsequently opened at intervals ranging from one to twelve months and in all cases the intestinal mucosa remained normal and distinct both macroscopically and microscopically.

*Resistance of the Intestinal Serosa to Gastric Digestion:*

The finding that the normal mucosa of the entire gastro intestinal tract would resist gastric digestion, raised the question whether or not that resistance was a property only of mucous membranes. And so a series of animals were run by filling the window by the serosa of the intestine using the technique of a gastro-enterostomy except that no stoma was made through the intestinal wall. In all these experiments, there was found in from one to three months, a smooth, round opening established between the stomach and intestine. In one case a small bridge of mucous membrane had persisted and withstood the digestion.

*Resistance of General Body Tissues to Gastric Digestion:*

Advantage was taken of the above experiments to test the possibility of the resisting property of other tissues and a series of experiments were run as follows: the spleen was used to fill the window in the stomach wall and was found to resist digestion. In order to rule out the fibrous capsule, a second series was run by decapsulating a portion of the spleen and exposing the splenic pulp directly to the action of the gastric juice. Upon subsequent section there appeared to be no digestion of the pulp macroscopically. Upon microscopic examination, however, there appeared many interesting changes. There was a relative connective tissue fibrosis in the exposed area with a preponderance of eosinophilic lymphoid cells. At both edges of the splenic implant there could be seen a single layer of columnar epithelial cells growing out from the stomach to cover the implant. Stains with fuchsin and muchematein indicated that this layer of cells all contained mucous, but there was no mucous cov-

ering the exposed spleen and great care had been taken not to disturb the exposed surface in preparing the specimen.

The kidney was used in the next series both before and after decapsulation and was found to resist digestion much in the same manner as the spleen. One dog was then operated upon, the left kidney partially decapsulated and implanted into the stomach, and then the right ureter was ligated. The dog was re-sectioned six months later and the right kidney was found to be completely atrophied while the left which was implanted into the stomach had taken on double function and was hypertrophied to about twice normal size. This shows that in addition to resisting the digestion, the kidney was capable of normal function.

Having demonstrated in the dog that the resistance to gastric juice digestion would seem to be a general property of tissues rather than being limited to the gastro-intestinal tract insofar as homogenous organs are concerned, it seemed advisable to test the experiment in another species of animal as well as to test the resistance of the tissues of one species against the gastric juice of another; and so a number of experiments were run in an attempt to gain further evidence on the problem.

*Resistance of Frog's Leg to Gastric Juice of Dog and Human in Vitro:*

It was early observed by Claude Bernard that the leg of a living frog when introduced into the stomach of a dog through a fistula would be digested away. Pavy found the same to be true with a rabbit's ear. These experiments were easily confirmed. The following experiments in Vitro were then conducted to amplify those early observations.

A number of test tubes were partly filled with gastric juice (dog's and human) of varying acidity and closed at the top with rubber dams. These dams were perforated so that they would fit loosely around the hind leg of a frog. In each case one hind leg was ligated so as to completely occlude its blood supply, the front legs were tied together to minimize movement, and each hind leg was introduced into a test tube and immersed in the digestant liquid. Digestion was allowed to proceed in the incubator at 37° C.

Tubes containing gastric juice varying in acidity from 0.064 per cent free acid and 0.108 per cent total acid to 0.356 per cent free and 0.439 per cent total acid were set up and other



tubes containing 0.4 per cent hydrochloric acid, Ringer's solution, and pancreatic juice (0.3 per cent alkalinity) and neutralized active gastric juice were used as controls. Digestion took place only in the tubes containing active gastric juice with hydrochloric acid; and the extent of digestion was directly proportional to the acid concentration of the gastric juice. During the complete digestion of the leg, the apparent resistance of the blood vessels was striking. In the leg which was not ligated, all of the tissues would be digested away, leaving a net work of capillaries surrounding the bone and finally one of the vessels would give way and fatal hemorrhage would ensue.

*Resistance of Frog's Leg to Frog's Gastric Juice in Vitro:*

The gastric mucosa from a number of frogs was obtained and extracted with 0.4 per cent hydrochloric acid. The artificial gastric juice thus produced was demonstrated to possess strong proteolytic activity. Frogs of the same species were subjected to the digestant action of this juice as above described. Digestion began in one hour and in six hours almost all of the entire soft tissues were digested away. The experiment is subject to the criticism that the acidity was perhaps higher than would be found in the normal secretion of the frog.

*Comment:*

The demonstration that the normal mucous membrane of the duodenum, jejunum, ileum, and colon can resist gastric digestion for months, indicates that the immunity is general rather than specific and is not limited to the gastric mucosa. The evident resistance of the jejunal mucosa makes it necessary to look for additional factors in the etiology of jejunal ulcers following gastroenterostomy. The application of acids stronger than could ever be present in gastric juice can have no significance in this general problem.

Furthermore, the fact that the capsule and parenchyma of the spleen and kidney resist gastric digestion indicates that the mechanism of this resistance does not reside in some physiological function peculiar to mucous membranes. Hunter's statement that all living uninjured cells can resist gastric digestion is in part verified.

The digestion of the frog's leg or rabbit's ear by dog's or human gastric juice both in vitro and vivo, is difficult to harmonize with facts obtained from transplanting tissues into the stomach. The

fact that the frog's leg may be digested by frog's gastric juice indicates that the destruction is not based on a foreign or heterologous digestive fluid, but may be accomplished by an animal's own enzymes.

It seems certain that the epidermis does not resist gastric digestion as do the other tissues described. This may be due to its relatively poor blood supply, but on the other hand, the fibrous tissue capsule of the spleen and kidney would seem to be little if any more vascular.

If the resistance be due to an anti-enzyme, then splenic implant would indicate that the young growing cells of the mucosa have quite as much resistance to the digestant action as that of the adult mature cell, and that the gastric juice does it must be widespread and is not specific to the alimentary tract. Furthermore, it must only be effective so long as the blood supply to the tissues is normal.

It seems highly improbable that a local production and covering of mucous is the important protective mechanism. The spleen and kidney do not secrete mucous and special stains showed that there was no layer of mucous covering the exposed tissues.

Activated gastric juice in which the hydrochloric acid had been neutralized had no digestant action. This would seem that the active pepsin was not the destructive factor but that the acid first killed the tissue and then the pepsin-hydrochloric acid digested it. This finding has considerable significance on the physiology of the formation of hydrochloric acid by the gastric glands.

The finding of a layer of epithelial cells growing out from the gastric mucosa to cover the not prevent a healing process if the cells are normal.

There can be no definite conclusions drawn except those which have been mentioned in our comment. Further work on the chemical side of the problem has furnished us with better grounds for conclusions, but owing to lack of space, a second paper will be necessary to properly cover the balance of the work.

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## THE DIAGNOSIS AND TREATMENT OF ACUTE GONORRHOEA IN WOMEN

C. W. SHACKELFORD, M. D.,  
West Palm Beach.

In dealing with this subject I shall not go into the history or the causes of the disease, but give you the methods I have found successful in its diagnosis and treatment.

It has seemed remarkable the number of women who have been to me for consultation—complaining of the typical symptoms of acute gonorrhoea, stating that they had been to a doctor and he had prescribed a douche and some medicine to take, without making an examination.

The general practitioner is the first person from whom these women seek advice and it is sought early, unless they are happily married and without suspicion.

Gonorrhoea in women is a condition that can be usually conquered, before it reaches the stage of chronicity and complications, if it is recognized early and proper treatment instituted immediately. Therefore, the doctor, in justice to his patient as well as to himself, should seek carefully for the cause of the symptoms complained of, so that no time may be lost and the chance for a complete cure, in the shortest possible time, be increased.

It has been my custom for a good many years to obtain as complete as possible a history from childhood up to the present illness and complaint: then a thorough physical examination from head to foot, including even blood-pressure and temperature. After this has been done the patient is ready for table and pelvic examination. The patient is placed on operating table in dorsal position, properly draped, facing window, with legs widely separated and comfortably supported, so that there may be complete relaxation. An examination of this kind is never made without the nurse's assistance. She prepares the dressing table with all the necessary instruments, etc., and stands ready to assist; her presence also allays the fear and embarrassment of the patient.

The lower abdomen is carefully palpated, observing closely for areas of deep tenderness and resistance, for swellings of the pelvic organs and inguinal glands. Adenitis, secondary to a pure gonococcus infection, is rare. Therefore if the inguinal glands are swollen, tender and inflamed, some other complication is apt to be present. Syphilis is the most common cause, but may be filth, chancroid or malignant disease.

I next inspect the external genitals. With the left hand, separate the labia with the thumb and fingers. Note the amount and characters of the vaginal secretions: is it a normal, clear milky mucus, or is it an opaque white, or yellow color, with an offensive odor? Test the secretions with litmus paper, healthy secretion is strongly acid, if it is alkaline, it is most likely pathological. The condition of the hymen, especially in the single woman, is carefully inspected. Inspect the vulva, note the color of the mucus membrane, the absence or presence of erosions, ulcers, swellings, or any other abnormalities. Frequently Bartholin's glands are found to be large and tender and unless the ducts are occluded, free pus may be expressed, and I have frequently found gonococci in the smear when examined microscopically. However, all infected Bartholin's glands are not of gonococcal origin.

Urethra: Before the vagina or cervix is interfered with, the urethra is inspected and examined. The mouth of the urethra may show no inflammation and swelling, yet pus may be seen exuding from the meatus. With the platinum loop obtain a specimen of this for a microscopic examination. In the absence of visible pus, introduce the index finger and milk the urethra from behind forward and obtain a specimen of the pus, if there be any expressed; if not, then introduce the platinum loop into the urethra and obtain a smear. I have frequently found gonococci when apparently no pus was present. Let me stress the point, that a single negative smear does not mean that the urethra or bladder is not infected. Now I clean with sterile gauze the area around the urethra and have the patient void in two glasses. If the urine is clear in both glasses and contains no threads, in all probability there is no bladder or urethral infection. If the urine in the first glass is cloudy and contains threads, and the second glass clear, there is a urethritis—the smear which was previously obtained will determine whether it is specific or non-specific. In acute urethritis a burning sensation is felt directly and throughout the act of micturition. A diagnosis of cystitis is made if there is increased frequency of urination with severe pain at the end of the act.

Vaginal and Cervical Examinations: For this I use an ordinary bivalve speculum, one blade shorter than the other. The cervix is brought into clear view between the blades of the instrument. With the blades closed and passed parallel to the

labia, there is very little discomfort, even when much inflammation is present. After the speculum has been introduced, gently rotate until the cervix is brought into view, then fix the blades with the screw. Before the speculum is introduced it should be well lubricated with KY jelly or some other suitable lubricant.

With sterile gauze held in ordinary sponge forceps clear away all the discharge, pus, blood or debris, then with probe, wood or metal, wrapped with cotton or wool, gently cleanse thoroughly the cervical canal, care being taken not to go beyond the internal os. The trained and experienced eye can almost at a glance from clinical appearance alone, distinguish between the discharge of gonorrhœa and that from other causes, but with laboratory facilities at hand, it is never necessary to be in doubt. Gently insinuate or rotate the platinum loop into the cervical canal and obtain some of the secretion for a smear.

As the speculum is removed from the vaginal tract, look for abnormalities, and after withdrawal make a careful bimanual examination of the pelvic organs, the gloved right index finger in the vagina, the left hand being placed between the legs on the abdomen. The pelvic organs can be easily felt and gone over systematically. Note if there is any swelling or tenderness in the fornices, or of the tubes or ovaries, or of the uterus. Note the mobility and position of the uterus. It is exceptional to find inflammation of the tubes or ovaries in the early stages of gonorrhœa, therefore the necessity for recognizing and treating early. This would eliminate the majority of chronic invalidism induced by "pus tubes," and subsequent mutilating operations. In examining slides for gonorrhœa I always use the Gram method, as the methylene blue stain is unreliable and misleading. When history, clinical symptoms and physical signs indicate gonorrhœa, even with negative bacteriological findings, I begin treatment and make daily examinations of the smear and am usually rewarded with Gram negative cocci.

**Treatment:** From the personal history, physical and clinical findings, and bacteriological study, if we have arrived at a diagnosis of uncomplicated acute gonorrhœa, the following routine is carried out with satisfactory success.

The patient is instructed to refrain entirely from all alcoholic beverages, from highly seasoned food and sexual intercourse, and whenever

possible, rest quietly in bed and at all times force fluids, particularly water, also advised to drink milk, barley water, fruit juices and even tea and coffee. With the exception of highly seasoned foods, diet is not restricted.

The patient is advised to take a hot sitz-bath night and morning, and remain in the water not uncomfortably hot, at least thirty minutes.

See that the bowels move daily, using milk of magnesia as a laxative if necessary.

By keeping patient in bed at this critical time (acute stage), all harmful exercise is avoided. The patient is allowed to come to the office daily for treatment, unless inflammation too severe. In that event, put to rest with head of bed elevated, so there will be better drainage and less chance of the infection spreading upward to uterus and tubes. Have the patient use the hot sitz-bath night and morning. Also cleanse the external genitals and vaginal tract with hot potassium permanganate solution 1-6000 twice daily, holding the douche bag not more than two feet high to avoid pressure. At this stage, if there is burning and tenesmus on urination, potassium citrate 20 grains and tincture hyoscyamus 30 minims in glassful of water is given every three hours.

With the patient on Valentine table in dorsal position and legs widely separated and comfortably supported, I irrigate the urethra and bladder with potassium permanganate solution 1-6000, water as warm as can comfortably be borne. The irrigator is held not higher than 2 or 3 feet, lower if the inflammation is severe. In the bladder irrigation, about one pint of the solution is used, left in for a few minutes and passed out by act of micturition. I then irrigate the vaginal tract with one to two pints of the same solution. Then with sterile gauze held in sponge forceps the cervix is dried. Now with a swab of wool wrapped securely around a probe, the cervical canal extending to the internal os is completely dried; with the same kind of probe dipped in 2 per cent acriflavine solution, the entire canal is painted. Then I pour into the vaginal tract 2 or 3 drams of the same solution, and place a wool tampon with tape attached, against the external os and allow to remain until next morning, when the patient is instructed to remove the tampon by the aid of the tape attached, and douche with warm, sterile salt solution, 2 ounces to the quart of water, before coming to the office for treatment.



The above routine is repeated daily until all the inflammation subsides and the discharge disappears.

As a rule the urethral and bladder infection clears up before that of the cervix. If difficulty is met in clearing up the urethral discharge, I dilate the urethra to 24 or 26 French and apply 5-10 per cent mercurochrome or 5 per cent silver nitrate. This is done twice a week without irritation or discomfort.

If the cervical discharge is unduly long in subsiding the canal is painted with 10 per cent silver nitrate or 10 per cent mercurochrome. A few applications are usually sufficient; however, if not, the cervical canal is packed with a gauze strip saturated with 10 per cent novocain solution, left in 20 to 30 minutes to anesthetize; the canal is then dilated anterior to the internal os and the

anterior, posterior and lateral walls seared with actual cautery. Most persistent discharges usually respond to this treatment.

**The Question of Cure:** The time has been from 6 weeks to 6 months. Some cases clear up so readily that if bacteriological examination had not been made I would doubt the diagnosis. Others are so persistent and obstinate that they would tax the patience of Job.

I consider a case cured when physical signs, clinical symptoms and bacteriological examinations are negative. When I consider that the case is cured I have the patient return to office once a month for examination. This should be continued for at least a year. And if there is no recurrence, patient is dismissed as positively cured.

#### CONVENTION HEADQUARTERS



Court

ALCAZAR HOTEL

Pool

### ST. AUGUSTINE

THE NEXT MEETING PLACE OF THE FLORIDA  
MEDICAL ASSOCIATION

St. Augustine is the Convention City ideal because there is so much to see that the hours outside the convention hall can be spent in an especially delightful fashion. The Oldest City, with its four hundred years of history and tradition, hopes to entertain many delegates in early April when the Florida Medical Association convenes and promises entertainment of an unusual sort.

St. Augustine, oldest city in the United States, was founded in 1565 by Pedro Menendez de Aviles and boasts of a distinctly foreign atmosphere.

The narrow streets, bordered by ancient houses with overhanging balconies, speak of the old world. The olden Plaza, which centers the city, is a graciously green parkway adorned with interesting monuments both ancient and modern. The old Slave Market, where tradition says slaves were bartered, is an interesting landmark located in the Plaza.

Much that is beautiful, quaint and interesting centers about this Plaza. Fronting it on one side is the Spanish Cathedral, veritably a bit of ancient Spain. Across the stretch of green park is picturesque little Trinity Episcopal Church, also a part of the old St. Augustine. Fronting on the Plaza, and occupying a park of its own, is the



Post Office, formerly the Spanish Governor's Mansion and possessed of a most interesting history. It is probably the oldest structure in the city today according to data obtained from old Spanish records in the archives of Madrid and Seville.

Proceeding northward from the ancient center of the city, one follows the picturesque bay front with its solid old sea wall or treads the narrow way of that famous thoroughfare of George the Saint. In either case, one comes straightway to the olden city gates, part of the ancient fortifications which once made St. Augustine a walled city. Fort Marion, grim and grey, surmounts the green slopes of its embankments and presents a picturesque view from whatever angle one may view it. This is the finest type of medieval fortification to be found in this country today.

The Fountain of Youth, about which so many interesting stories and traditions are entwined; the Oldest House; the State Arsenal, once a Franciscan monastery, are all part of the St. Augustine which encourages one to ramble, to dream, to dwell in the picturesque past.

Each year a spectacular pageant is presented here which revivifies the drama of a colorful past. This year all members and guests attending the annual meeting of the Association will



East Coast Hospital

have the opportunity of witnessing this most unusual performance, as the dates of April 2nd, 3rd and 4th have been chosen for the Ponce de Leon celebration. The ancient city will be literally transformed into the age-old Mother City, gay with the brocaded velvets of the Spanish Dons and echoing to the clash of arms and the boom of the blunderbus.

For three days St. Augustine loses its identity in the gigantic pageant which constitutes a panoramic presentation of the discovery of Florida by Don Juan Ponce de Leon; the founding of St. Augustine by Don Pedro Menendez de Aviles in 1565 and the sacking of the struggling little Spanish settlement by Sir Francis Drake and his band of buccaneers in 1586. •

These events, performed with true devotion to



Ancient City Baptist Church Trinity Episcopal Church Memorial Presbyterian Church Historic Catholic Cathedral

Grace Methodist Church

historical detail by a cast of gorgeously arrayed characters, all contribute toward a three-day fiesta which enthralles St. Augustine and brings everything and everyone under the spell of the Ancient City, enhanced one hundredfold by the presence of the gaily costumed principals and decked out as no other city in America could be.

The city's quaintly narrow streets, many of which are still as originally laid out by the Spanish conquistadores, are alive with color and draped in the colors of Old Spain. Business is at a standstill and for three days the entire community gives itself over to creating the atmosphere which has brought upon the Ponce de Leon Celebration the reputation of being the most historical and resplendent epic of early American pageantry.

For the modern part of the St. Augustine that is outstanding as a progressive municipality, the city lays claim to beautiful churches, modern schools, splendid golf links and other improvements that have to do with comfortable, delightful living, with all things that appeal to the aesthetic and athletically inclined resident and visitor.

St. Augustine is outstanding among municipalities, for there is no other place just like it. You may visit hundreds of cities and find them all more or less alike. Modern, comfortable, attractive, possibly but with no particular atmosphere, no aura of the ancient, the dramatic or the picturesque. St. Augustine is an indescribable blending of the old and the new. She invites the

members of the Florida Medical Association to be her guests, to tarry within her historic City Gates for the three days of the forthcoming state convention, April 1, 2 and 3, and test her hospitality and old world charm.



THE MOAT AROUND FORT MARION

CONSTITUTION MONUMENT  
IN PLAZA

THE SLAVE MARKET



STATE ARSENAL—MILITARY HEADQUARTERS OF FLORIDA



U. S. POST OFFICE—FORMERLY SPANISH GOVERNOR'S MANSION



# PROGRAM

*of the*  
FIFTY-SIXTH ANNUAL MEETING  
*of the*  
FLORIDA MEDICAL ASSOCIATION, Inc.  
TO BE HELD AT ST. AUGUSTINE, FLORIDA  
APRIL 2nd and 3rd, 1929

## INFORMATION.

Information desk will be located in the Alcazar Casino with continuous service throughout the meeting. All members will be required to register and secure identification badges before attending any of the sessions. Guests and ladies are requested to register. Tickets for the banquet, Wednesday evening, April 3rd, may be obtained at the registration desk.

## PROGRAM OF ENTERTAINMENT.

*Monday, April 1st.*

8:30 p.m. Informal Smoker, St. Augustine Links.

*Tuesday, April 2nd.*

Golf Tournament, St. Augustine Links.

8:30 p.m. Organ Recital, Lorenzo Pratt Oviatt, Memorial Presbyterian Church. (Complimentary)

*Wednesday, April 3rd.*

Golf Tournament, St. Augustine Links.

8:00 p.m. Annual Banquet, Ponce de Leon Hotel (cover charge, \$3.00).

## ENTERTAINMENT FOR LADIES

Headquarters: Drawing room of the Alcazar Hotel.

*Monday, April 1st.*

8:30 p.m. Card party at the Ponce de Leon Hotel, complimentary to the wives of the members.

*Tuesday, April 2nd.*

10:00 a.m. General session with State meeting in the Alcazar Casino.

4-6 p.m. Reception and Tea at the Flagler Hospital, by the ladies of the Flagler Hospital Auxiliary—complimentary to the wives of members of the Florida Medical Association and members.

8:30 p.m. Organ recital, Memorial Presbyterian Church, Lorenzo Pratt Oviatt. (Complimentary)

*Wednesday, April 3rd.*

10:00 a.m. Alcazar Drawing Room, Meeting of Woman's Auxiliary.

1:00 p.m. Luncheon, Ponce de Leon Hotel, complimentary to wives of members of the Florida Medical Association.

3:00 p.m. Complimentary automobile drive about the city to points of interest given by citizens of St. Augustine, under the direction of the Chamber of Commerce—leaving Alcazar entrance.

8:00 p.m. Banquet, Ponce de Leon Dining Room. (Cover charge, \$3.00.)

## HOTELS

Alcazar Hotel (special rate, American Plan)	\$6.00
Alhambra (European and American Plan)	2.50 to \$5.00
Barcelona (American Plan)	6.00 to 7.00
Bennett (American Plan)	6.00 to 8.00
Buckingham (American Plan)	5.00
Dunham House (American Plan)	3.00
Kenwood (European Plan)	2.00
Marion (American and European Plan)	2.50 to 5.00
Monson (American Plan)	6.00 to 9.00
Ocean View (European Plan)	1.50 and up
Ponce de Leon (special rate, American Plan)	6.00
St. George (American Plan)	5.00
Valencia (American Plan)	4.00 to 5.00

## TECHNICAL EXHIBITS

Technical exhibits will be located in booths in the Casino of the Alcazar Hotel.

The technical exhibits have a real scientific value and

physicians who wish to keep abreast of the times and know the latest in drugs and medical appliances should spend some time with these exhibits. It will be surprising the great amount of useful information that can be procured at these exhibits. Many have nothing for sale, the representatives of the firms being there to give the latest information regarding their products. Those who have items for sale will gladly give information whether there is a purchase or not. Be sure to visit the Technical Exhibits.

## LOCAL COMMITTEE ON ARRANGEMENTS

J. M. IRWIN, *Chairman*

E. S. Estes

## RECEPTION COMMITTEE

S. A. SCRUGGS, *Chairman*

S. G. Worley

J. M. Irwin

J. J. Spencer

Milton Walton

W. D. Webb

Gordon Stanton

W. B. Guy

G. W. Potter

E. S. Estes

H. E. White

A. C. Walkup

A. W. Underwood

W. E. Burnett

## TECHNICAL EXHIBIT COMMITTEE

S. A. Scruggs

H. E. White

## ENTERTAINMENT COMMITTEE

G. W. POTTER, *Chairman*

W. E. Burnett

A. C. Walkup

## LADIES' COMMITTEE

MRS. J. M. IRWIN, *Chairman*

Mrs. E. S. Estes

Mrs. A. W. Underwood

Mrs. W. B. Guy

Mrs. A. C. Walkup

Mrs. G. W. Potter

Mrs. Milton Walton

Mrs. S. A. Scruggs

Mrs. W. D. Webb

Mrs. J. J. Spencer

Mrs. S. G. Worley

Mrs. Gordon Stanton

## FIRST GENERAL SESSION

Alcazar Casino

APRIL 2ND, 10 A. M.

Call to order, J. M. Irwin, Chairman of Committee on Local Arrangements.

Invocation, The Reverend Barton B. Bigler, D.D., Pastor, Memorial Presbyterian Church.

Address of Welcome on Behalf of St. Johns County Medical Society, W. D. Webb, President.

Address of Welcome on Behalf of the City of St. Augustine, The Honorable George W. Bassett, Jr., Mayor.

Response, J. Knox Simpson, Jacksonville.

Announcements.

Address of President, "Medical Cooperation," Frederick J. Waas, Jacksonville.

Address (by invitation), "Perfected Methods in the Operation for the Bad Risk Goiter Patient," William D. Haggard, Nashville, Tenn.

## SECOND GENERAL SESSION

Alcazar Casino

APRIL 2ND, 12:15 P. M.

President in the Chair.

Report of Officers:

Secretary-Treasurer-Editor, Shaler Richardson.

Executive Committee, L. M. Anderson.

Committee on Legislation and Public Policy, W. M. Rowlett.

Hospital and Medical Education Committee, John E. Boyd.

Committee on Publication, R. H. McGinnis.



## SCIENTIFIC ASSEMBLY

Alcazar Casino

APRIL 2ND, 2 P. M.

Committee on Scientific Work: G. H. Edwards, Orlando, Chairman; J. D. Love, Jacksonville; A. M. C. Jobson, Tampa.

Attention is called to the following By-Laws:

"All papers read before the Society shall be its property. Every paper shall be deposited with the Secretary when read."

"No address or paper before the Association, except those of the President and Orators, shall occupy more than fifteen minutes in its delivery, and no member shall speak longer than five minutes, nor more than once on any one subject."

Drs. Cunningham and Shaw have offered their projecting lantern and daylight screen. Essayists desiring to present lantern slides are asked to communicate before the meeting with Dr. W. McL. Shaw, Jacksonville.

1. "The Advantages of Roentgenographic Diagnosis During the Progress of Labor." Joseph Halton, Sarasota.

Lantern slides showing a normal presentation; deformed pelvis; cranial pressure; twin pregnancies; and breech presentation. Conclusion: opportunity of visualizing the mechanism of labor in the pelvis; obviates necessity of vaginal examination; clearer idea of application of forceps; malformations; relative position of twins; mental tranquility between doctor and patient and for use in the teaching of obstetrics.

Discussion: J. C. Dickinson, Tampa.

2. "Fractures of the Skull. Importance of Early Diagnosis as to Treatment, Operative and Expectant," J. Ralston Wells, Daytona Beach.

Classification; Symptoms and signs; treatment and indications pointing to operative or expectant treatment; expectant treatment; types of operations; prognosis.

Discussion: E. H. McRae, Tampa.

3. "Intrauterine Injection of Lipiodol As a Diagnostic Aid in Gynecology," W. M. Rowlett, Tampa.

In determining tubal patency, or diagnosing uterine and tubal pathology, the lipiodol roentgenogram furnishes the clinician with a permanent clinical record that has no equal. These roentgenograms likewise will aid materially in deciding the question when and when not to operate and what surgical relief is to be expected. This is especially true in those cases of functional disturbances of the sexual organs and where the pathological changes in the uterus and tubes can not be determined by manual or bimanual palpation.

While Rubin and others have for some time been using collared solution and other opaque media for the demonstration of patent and non-patent fallopian tubes, the after effects from pelvic irritation were too great to justify their continual use. With lipiodol we are getting just as good, if not better, roentgenograms and with practically no pelvic irritation or discomfort. With so simple a technique and with a minimum amount of danger, I believe, this method as a diagnostic means is justified.

Discussion: Franklyn Thorpe, Tampa.

Thos. F. Field, Jacksonville.

4. "Chronic Endocervicitis," H. A. Day, Orlando.

Prevalence; Etiology; Pathology; Symptoms; Treatment. Special stress on pathology.

Discussion: G. F. Oetjen, Jacksonville.

J. W. Snyder, Miami.

5. "Diabetes Insipidus," Herbert L. Bryans, Pensacola. Results of pituitary extract and pitressin administration. Report of a case.

Discussion: E. W. Bitzer, Tampa.

J. D. Love, Jacksonville.

6. "Maculo-Anaesthetic Leprosy," J. Lee Kirby-Smith, Jacksonville.

The occurrence of leprosy in the United States and the attention to the endemic aspect in Florida. Clinical diagnosis of leprosy: Gold Sodium Thiosulphate intravenously used with benefit both objectively and subjectively in one case of maculo-anaesthetic leprosy. Lantern slides.

Discussion: Elmo D. French, Miami.

C. A. Andrews, Tampa.

7. "Benign Rectal Stricture Treatment with Carbon Dioxide Snow," Jack Halton, Sarasota.

Failure of thorough examination of rectum permits advanced stages of pathological conditions before treatment is instituted. Formation and types of stricture. Their predisposing causes, as shown in a brief review of case records, personal and from recent literature. Necessity for elimination of aggravating causes. Emphasis on the necessity for recognition of stricture type, as treat-

ment varies according to type. Surgery for stricture being replaced by non-surgical treatment which renders the fibrosed tissue soft, boggy, and more pliable as time passes. Carbon dioxide snow, the medium of choice. What it is. Its application. Dangers to be avoided in its use. Time and frequency of treatments. Results. Ease of patient, as compared to patient under surgical care. Demonstration. How to make carbon dioxide snow, and method of application.

Discussion: F. J. Waas, Jacksonville.

## MEETING OF HOUSE OF DELEGATES

Drawing Room, Alcazar Hotel

APRIL 2ND, 5 P. M.

## SCIENTIFIC ASSEMBLY

Alcazar Casino

APRIL 3RD, 9 A. M.

8. "Pyelovenous Backflow," Louis Orr, Orlando.

Cumulative experimental evidence of the phenomenon of the passage of material from the pelvis of the kidney into the renal veins, with subsequent diffusion into the general circulation, occurring under varying degrees of back pressure. To this interesting occurrence has been applied the name "Pyelovenous backflow." This backflow has been described as following a very definite route, confined to the veins, in the nature of an ascending drainage of the pelvic contents under conditions of back pressure, usually at a pressure lower than the secretory pressure of the kidney. Pyelovenous backflow is shown to be definitely separate and apart from tubular backflow, although the two may occur simultaneously. The claims of the various experimenters are set forth in the forms of their particular experimental results. In the event of the presence of pyelovenous backflow clinical therapy for certain types of kidney conditions, such as hydronephrosis, may be altered so as to allay progress of the condition and conserve the function of organ.

Discussion: John Hall, Miami.

E. S. Gilmer, Tampa.

9. "Woodruff Catheter Technique in Modern Cystoscopy and Uretero-Pyelography," Roy J. Holmes, Miami.

Dr. Stanley Woodruff has recently devised an occlusion catheter which simplifies kidney catheterization and definitely establishes uretero-pyelography as an office procedure. This catheter is only introduced a distance of about 2 c.m. within the ureteral orifice. The absence of severe reactions following this procedure and the better delineation of the ureter and kidney pelvis should appeal to the cystoscopist and the roentgenologist. Dealing with our personal observations and experiences with this method. Presentation of lantern slides by Doctor G. Raap.

Discussion: E. S. Gilmer, Tampa.

John Hall, Miami.

G. Raap, Miami.

10. "A Discussion of Perinephritic and Paranephritic Abscess," James L. Estes, Tampa.

Anatomical and pathological considerations. The location of the accumulated fluid of the two conditions are different. Also the extension or spread is along different planes. Etiology. Paranephritic abscess usually due to trauma and hematoma formation with infection through the blood stream. The perinephritic type being an extension from previous infected kidney and rupture into the space. Diagnoses; History, physical examination including urological examination, X-ray and pyelogram. Report of cases, proven at operation. Treatment: Open drainage.

Discussion: Alvin L. Mills, Tampa.

Louis Orr, Orlando.

11. "Pyelitis in Infancy and Childhood," Douglas D. Martin, Tampa.

Diagnosis by (1) Laboratory findings; (2) X-Ray findings; (3) Cystoscope. Treatment.

Discussion: J. D. Love, Jacksonville.

G. S. Osincup, Orlando.

12. "The Factors in the Successful Feeding of Infants and Children," Wm. E. Sinclair, Orlando.

Discussion of necessary foods: Various milks on the market; Accessory food factors (vitamins); Result of lack of these; Essentials of well-balanced diet. (2) The Child: Indications for certain diets; Importance of definite daily routine; Home hygiene. (3) The parents: Intelligent co-operation and attempt to understand psychology of child's mind.

Discussion: Jas. D. Love, Jacksonville.

Douglas D. Martin, Tampa.

13. "Anorexia in Children," Council C. Rudolph, St. Petersburg.

Interrelation between the physiological and psychological basis of appetite; Influence on appetite of organic disease. Prevention of anorexia, in most cases a psychological problem; History of cases of long standing.

Discussion: Luther W. Holloway, Jacksonville

Geo. L. Cook, Tampa.

14. "Scarlet Fever Antitoxin," Luther Holloway, Jacksonville.  
Scarlet Fever incidence and severity; Sequelae; Causes, Summaries; Beneficial results from the serum and summary.  
Discussion: Council C. Rudolph, St. Petersburg.  
W. E. Sinclair, Orlando.

## THIRD GENERAL SESSION

Alcazar Casino  
APRIL 3RD, 12 M.

The President in the Chair.  
Annual election of officers.  
Adjournment for lunch.

## SCIENTIFIC ASSEMBLY

Alcazar Casino  
APRIL 3RD, 2 P. M.

15. "The Newly Created Specialty, Aviation Medicine," Ralph Green, Jacksonville.  
Emphasizing the medical aspects of our present-day aviation program, along lines, for instance, of stating that during 1928, aeroplanes are known to have flown fifty-six million miles in the United States, each mile being flown by pilots all of whom are under medical supervision. The effects of anoxemia at high altitudes; The circulatory problem and the neuro-psychiatric phase of aviation examination.  
Discussion: H. H. Harris, Jacksonville.  
L. C. Ingram, Orlando.
16. "Reduction of Closed Fractures with Local Anesthetic," E. H. McRae, Tampa.  
The method of handling closed fractures and dislocations with local Anesthesia (Novocaine) with report of cases and presentation of X-ray pictures.  
Discussion: Leland Carlton, Tampa.  
A. M. C. Jobson, Tampa.
17. "Laryngeal Tuberculosis and its Treatment by the Electrocautery," H. Marshall Taylor, Jacksonville.  
Etiology; Pathology, Symptoms and Treatment. Lantern Slide Demonstrations.  
Discussion: J. B. Farrior, Tampa.  
Wm. Y. Sayad, West Palm Beach.
18. "Surgery in the Diabetic," Alex. M. C. Jobson, Tampa.  
Application of surgery to the diabetic, with its present relation to the advanced and chronic cases. The pre and post operative treatment. What insulin will and will not do. Surgical mortality in diabetics.  
Discussion: W. E. Burnett, St. Augustine.
19. "Radium in the Treatment of Uterine Haemorrhage," Gerry R. Holden, Jacksonville.  
Causes of uterine haemorrhage in general. Lesions in which radiation is of no value, or in which it is absolutely contraindicated. Groups remaining, more or less amenable to treatment with radium radiation. Effects of radium upon haemorrhage as a symptom of uterine cancer. Physiological action. Indications. Results. Benign tumors of uterus. Value in controlling haemorrhage in myomata. General rules regarding use in such cases. Results. Its use in haemorrhage without gross anatomical lesions: "idiopathic haemorrhage." Indications and contra-indications. Statistical results. General Conclusions.  
Discussion: W. M. Rowlett, Tampa.  
Harry Peyton, Jacksonville.
20. "The Surgical Treatment of Exophthalmic Goitre," John S. Helms, Tampa.  
General considerations, incidence, etc.; Definition; Dangers of the operation; Causes of death-percentage of mortality. Preoperative preparation; Depending on kind of Goitre and condition of patient; Nontoxic Adenomata; Toxic Adenomata; Exophthalmic Goitre; Preliminary ligations and stage operations discarded since use of iodine introduced by Plummer in 1922; A discussion of the difference of opinion among surgeons as to the use of iodine and digitalis before operation in Toxic Adenomata cases; Psychologic management important. The Operation: Preoperative narcotic; Choice of anaesthetic; Operating personnel; Technique; Drainage. Post operative treatment: Use of iodine; Position in bed; Administration of fluids. Post operative complications: Injury to nerve; Hemorrhage, Post operative tetany; Embolism; Pneumonia; Infection. Prognosis; Amount of Gland necessary to remove; Post operative regimen.  
Discussion: John E. Boyd, Jacksonville.  
John W. Snyder, Miami.
21. "Hypothyroidism and Low Metabolic Rate, Their Relation to the South," T. Z. Cason, Jacksonville.  
Many hypothyroid cases and low metabolisms probably due to climatic conditions. Series of cases in which the metabolic rate is low and which is evidently due not only to a hypothyroid condition, but to a hyposecretion of the suprarenal glands. The treatment of the two types of cases is entirely different, the former being much more successful than the latter. I am also endeavoring to show the relation between these hypothyroid cases and blood volume.  
Discussion: A. L. Walters, Miami Beach.  
W. C. Blake, Tampa.

PROGRAM OF THE  
TENTH ANNUAL MEETING  
OF THE  
FLORIDA RAILWAY SURGEONS' ASSOCIATION  
Alcazar Hotel, St. Augustine  
APRIL 1, 2 P. M.

## ENTERTAINMENT

8:30 p.m. Smoker and Entertainment at St. Augustine Links.

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J. J. Spencer .....St. Augustine  
Gordon Stanton .....Hastings

## GENERAL SESSION

Alcazar Casino  
APRIL 1ST, 2 P. M.

Chairman Committee on Arrangements, W. E. Burnett, St. Augustine.  
Invocation, The Reverend Harry Farmer, St. Augustine.  
Address of Welcome, J. M. Irwin, St. Augustine.  
Response, Joseph Halton, Sarasota.  
President's Address, L. M. Anderson, Lake City.

## SCIENTIFIC PROGRAM

- "Volkman's Contracture Following Supracondyle Fracture," A. R. Beyer, Tampa.  
Diagnosis and Treatment; Lantern slides.  
Discussion: (1) W. E. Burnett, St. Augustine.  
(2) H. D. Clark, Fort Pierce.
- "Fractures of the Pelvis," T. H. Bates, Lake City.  
Classification; Relief from Shock; Necessity of Repair to Urinary Tract Damage; Detailed Description of Murphy Sling Treatment; Case Reports.  
Discussion: (1) C. W. Shackelford, West Palm Beach.  
(2) H. B. McEuen, Jacksonville.
- "Coxalgia," W. E. Whilock, High Springs.  
Etiology; Differential Diagnosis and the Newer Treatment.  
Discussion: (1) D. Y. Rosborough, Palatka.  
(2) J. E. Crump, Winter Haven.
- "The Tannic Acid Treatment of Burns," N. A. Baltzell, Marianna.  
Tannic Acid properly applied is preeminently a good treatment for burns; It permits rapid healing; Toxemia is noticeably limited; Scarring is less marked; The death rate is perhaps lower than in other treatment.  
Discussion: (1) J. A. Alsobrook, Plant City.  
(2) John B. Tower, Homestead.

MOVING PICTURE FILM: Diagnosis and Treatment of Infections of the Hand. This picture is sponsored by the American College of Surgeons and is based on the most authoritative work on the subject; it covers by means of photographs and animated drawings this phase of an important part of all surgeons' work, and should be seen by all present.



## THE HONOR GUEST OF THE NEXT ANNUAL CONVENTION



DR. WILLIAM D. HAGGARD

One of the features of the St. Augustine meeting will be the presence of Dr. William D. Haggard of Nashville, Tennessee, who will be our honor guest and address the Association on "Perfected methods in the Operation for the Bad Risk Goiter Patient."

Dr. Haggard is a past president of the American Medical Association. He is professor of Gynecology and Abdominal Surgery of the Vanderbilt University Medical School, surgeon and president of the staff of St. Thomas Hospital, and visiting surgeon Vanderbilt Hospital. Dr. Haggard served as Major and Lieutenant Colonel, Medical Corps, U. S. A.; surgeon Evacuation Hospital, No. 1, Toul, France, 1918-1919, also consultant in surgery, Mesves Hospital Center, France. He was chairman of the medical

section Council National Defense, State of Tennessee; Major and medical aide to Governor of Tennessee; member Advisory Board Division of Surgery, Surgeon General's Office, Washington, D. C. He is a past president of the Council on Medical Education, ex-president of the Tennessee State Medical Association, ex-president of the Middle Tennessee Medical Association, and ex-president of the Nashville Academy. He is president-elect of the Inter-State Post Graduate Assembly of North America and a member of the Societe Internationale de Chirurgie. Dr. Haggard needs no introduction to an American medical audience and our members should, indeed, consider it an honor to have him present as honor guest.



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## THE ST. AUGUSTINE MEETING

The next annual meeting of the Florida Medical Association will be held in St. Augustine, April 2nd and 3rd. The local Committee on Arrangements have been very active throughout the past year in planning for the entertainment of our members. Through the courtesy of the Florida East Coast Hotel Company, the Alcazar and Ponce de Leon hotels are remaining open throughout the meeting. Especially attractive American plan rates have been arranged. The meeting place will be in the Casino of the Alcazar hotel which provides excellent accommodations for both the scientific sessions and the technical exhibits.

The entertainment program is replete with interesting features. The annual banquet will be held in the dining room of the Ponce de Leon hotel; the Scientific Program Committee have arranged a most interesting and diversified program which appears in this issue of the JOURNAL. Dr. William D. Haggard of Nashville, Tennessee, a past president of the American Medical Association, will be our honor guest. The subject of his oration will be "Perfect Methods in the Operation for the Bad Risk Goiter Patient."

## THE HOUSE OF DELEGATES

In the organization of the Florida Medical Association there is placed a group which has been designated as The House of Delegates. The function of this body at the present time is very perplexing and while the county societies are sending their representatives, there seems to be very little that they can accomplish. It is very evident that in our representative form of government a large amount of the business could be shouldered by this group to the betterment of the Association. The annual session lasts only two days, and to ask the full body to act on the current business only impedes progress due to lack of interest and may bring faulty conclusions due to lack of knowledge. On the other hand it is the only method by which the smaller county societies may have comparable representation to the larger ones. At the present time it would be very easy for any one of the large organizations at the annual session to so fill the meeting that their wishes would rule. If the House of Delegates should be given the proper responsibility in the Association, the delegates themselves would be more interested and the component organization would see that their representatives would be of the highest calibre obtainable. For the sake of progress in business affairs, better and closer thought to our own problems and in the spirit of fairness to all the county societies whether large or small, let us consider giving to the House of Delegates that power to facilitate the management of our Association.

## COUNCILORS' REPORTS

The following reports were presented by the councilors of the Florida Medical Association at the pre-convention meeting held in Orlando, January 28th. Indicative of the increasing interest in organized medicine by the men throughout the state is the fact that at this meeting sixteen councilors presented reports of progress for the year 1928; at the former pre-convention meeting, reports for 1927 were heard from only ten councilors.

FIRST DISTRICT—W. C. PAYNE . . . *Pensacola*  
Okaloosa, Walton, Santa Rosa, Escambia.

As councilor of district No. 1, I beg to report as follows:

This district comprises Okaloosa, Santa Rosa, Walton and Escambia Counties. In the counties of Okaloosa, Walton and Santa Rosa there are so few doctors that it is not practical to have a society in each county. We have a bi-county society, composed of Okaloosa and Walton counties, and in these two counties all eligible

men are members of the bi-county society. They have regular monthly meetings held at Crestview and DeFuniak Springs. The attendance is good and the meetings are interesting. I have met with them one time since my last report. Santa Rosa and Escambia county societies are combined under the name of the Escambia County Medical Society. Monthly meetings are held with fair attendance. The programs and attendance in the past have not been all that we could have wished. However, there seems to be a new spirit instilled and the outlook at the present time is the best since I have been a member during the last fourteen years. There are about fifteen Army and Navy medical men stationed at Pensacola and we have decided to make more effort to interest these men in our meetings, believing that there will be a mutual benefit resulting. Members of our society during the past year have made trips to nearby counties in Alabama on several occasions to meet with the men of these counties, and these men have reciprocated. Altogether, the condition of organized medicine in district No. 1 is in a healthier state than at any time during my councilorship of this district. Every eligible man, with the exception of three, in these four counties is a member of the Florida Medical Association.

SECOND DISTRICT—JULIUS C. DAVIS . . . *Quincy*  
Liberty, Gadsden, Jefferson, Wakulla, Leon, Franklin.

The counties in the second district have one medical society, which takes the place of the county medical societies, known as the Leon-Gadsden-Liberty-Wakulla-Jefferson County Medical Society, or the Second District Medical Society.

We have quarterly meetings that are well attended, the alternate meeting places being Tallahassee, Monticello, Quincy and Chattahoochee. Every member of the society attends some of the meetings during the year with the exception of the three physicians in Apalachicola, and they are so located they are almost inaccessible, taking more than a day to make the journey.

All the desirable men in this district are members with two or three exceptions. One of our prominent eligible men refuses to come in on account of what he calls an unethical hypocrite in his home town being a member, which is unfortunate.

I believe that the members in our district manifest as much interest as is to be found anywhere.

At these meetings it is our policy to have four papers by local men and one by an outstanding honored guest. Very few times have we varied from this rule. With papers from our local men we generally have a very hearty and interesting discussion.

THIRD DISTRICT—T. H. BATES . . . *Lake City*  
Hamilton, Dixie, Taylor, Madison, Columbia,  
Suwannee, Lafayette.

In the third district there are six counties, in which there are five organized county medical societies. The sixth county has only one physician. There is also a well-attended, active, independent medical society, embracing most of the physicians in the district.

Your councilor has contacted, either personally or by telephone or letter, each of the county societies. The spirit of harmony and cooperation apparently exists in each community.

There are fifty-nine physicians in the district, of whom forty-seven are eligible for membership in the county societies. Thirty-seven are members and thirty of these have paid their 1929 dues.

During 1928 two physicians have died in the district; one physician has retired from practice; one retired physician has resumed practice, and there have been eight additions to the number of physicians in the district.

The above information, in tabulated form as to each county, is appended hereto.

There still exists a fairly widespread opinion among the physicians of this district that the dues of the state association are exorbitant and should be reduced.



County Society	Columbia	Hamilton	Madison	Suwannee	Taylor	Lafayette	Total, Third District
Number M.D.'s in County	24	8	9	9	8	1	59
Number Eligible for Membership	17*	6	8	8	8		47
Number Members	11	5	7	6	8		37
Number Paid Up for 1929	11	5	5	1	8		30
Number Died in 1928	1	0	0	1	0		2
Number Moved into County during 1928	4	0	1	2	1		8
Number Moved Out	0	0	0	1	0		1

\*Four members staff U. S. Hospital.  
One negro member of colored medical society.  
One woman, member of Texas medical association.  
Two superannuated.

#### FOURTH DISTRICT—HERRMAN H. HARRIS, Jacksonville

Nassau, Clay, Duval, St. Johns.

During the year 1928 organized medicine in the fourth councilor district has marched steadily forward. No new medical societies have been formed. However, the Duval County and the St. Johns Medical Societies have not only augmented their membership from within their respective counties, but have reached out into Nassau and Clay counties and brought within the fold of organized medicine, with but five exceptions, every available man in this district. I am sure no district can boast of a more harmonious and sturdy corpus medicæ.

##### Duval County

1927 Membership, Duval County Medical Society, 100% paid	141
New Members, 1928—Drs. Copp, Carradine, Krueger, Maines, Porter, Williams, Gorman, Mitchell, Favor	9
	150
Less—Loss by Death (Drs. Harris, Jackson and Adams)	3
Less—Loss by Removal (Dr. Pittman)	1

1928 Membership, Duval County Medical Society.. 146

##### Nassau County

Six eligible physicians could not be induced to become members of the medical society in this district. Each of these physicians has been personally approached by the Councilor and by repeated correspondence, effort has been made to induce them to join their nearest society.

##### Clay County

All doctors in Clay County are members of either the Duval County or St. Johns County Medical Societies.

##### St. Johns County

Only two eligible physicians have not become members of their local medical society.

The standards of medical practice have increased. More men are availing themselves of post-graduate instruction and with the hospitals within the district strictly adhering to the requirements of the American

Medical Association and the hospital section of the American College of Surgeons as to the requirements for the privilege of hospital practice. Many men are serving as assistants to surgeons and physicians of wider experience and perhaps greater skill. Certainly this could but lead to higher standards in practice and greater service to those whom we serve.

During 1928 the new St. Vincent's Hospital, Jacksonville, opened its doors. It is most modern in every respect and is beautifully located upon the banks of the majestic St. Johns River. This hospital has a bed capacity of 250, of which 175 are ready for use, the balance being held in reserve for emergency.

The Duval County Hospital, Jacksonville, increased its bed capacity from 188 to 215.

St. Luke's Hospital, at Jacksonville, contemplates expansion within the near future.

Brewster Hospital, Jacksonville's colored hospital, begins construction this spring on its new hospital which is to be completed in 1930.

With these projects completed, or in course of construction, this district will be amply supplied with hospital accommodations.

Altogether, medical matters are most satisfactory in this district, and if 1929 is as good as 1928, most of us boys will be able to buy a new Ford next Christmas.

#### FIFTH DISTRICT—J. L. CHALKER, Ocala Marion and Citrus.

The fifth district comprises the counties of Citrus and Marion.

The physicians of Citrus County are members of the Pasco-Hernando-Citrus County Medical Society.

This society meets once each month, alternating the meeting place between the counties. All the physicians of Citrus County are members of this society, which is a well-organized society, and they put on a scientific and social program each month.

The Marion County society meets once a month on the third Thursday, at noonday luncheon, in Ocala. All physicians in active practice are members in good standing. We have several physicians not in active practice that we carry as honorary members of local society, but as there is no provision to carry them as honorary members of State Association, their names do not appear as members on our roster.

#### SIXTH DISTRICT—

ROSCOE H. KNOWLTON, St. Petersburg  
Pinellas.

The Pinellas County Society has enjoyed a profitable year under the able leadership of its President, Dr. H. L. Putnam, and Secretary, Dr. O. O. Feaster. The latter is now serving his ninth consecutive term in this office.

This society has held four consecutive meetings, besides one stag dinner and the annual dinner-dance for the ladies. In addition to the papers and case reports from our own members, we have had the pleasure of hearing Dr. Neyman of Northwestern University, Dr. Douglas of the Public Health Service, Dr. Jack Halton of Sarasota and Dr. Leland Carlton of Tampa.

Our total membership as of December 31, 1928, was 82, as compared with last year's total of 86. The society reports 100% of its members as paying dues to the State Association in 1928.

Among other activities, the society has cooperated with the local chamber of commerce in preparing and sending out ethical literature regarding the benefits conferred by Florida sunshine.

Meetings are held on alternate Fridays in the Y. M. C. A. Building, St. Petersburg, and a welcome is always extended to all visiting physicians.

#### SEVENTH DISTRICT—MAURICE E. HECK, Miami Brevard, Volusia, Seminole.

As councilor for the seventh district, Florida Medical Association, comprising the counties of Brevard, Seminole and Volusia, I submit herewith my report for the year 1928-29:



Being a member of the Volusia County Society, it was not necessary to make any special trips here in the performance of my duties as councilor, and as all but one, possibly two, of the Seminole County members reside in Sanford, and as they have a live, going society there also, I did not find it necessary to visit this county.

With reference to Brevard, I have been unable to get in direct touch with their new officers there, and though I made three trips through this county in September, November and December, 1928, on which occasions I called on several of the physicians who are members of this society, I have not attended any regularly called meetings. However, from informal reports I am able to state that they have a well-organized society and that practically all of the regular men in the county are members. I can, therefore, honestly report three live, wide-awake county societies in the seventh district.

The following is a report of the secretaries of the various county societies in my district:

*Brevard County*

(No report.)

*Seminole County*

Report of Seminole County Medical Society, 1928-29:

Number of Members of Society .....	13
Number of Practitioners Licensed in County .....	13 white 2 colored
Number of Osteopaths .....	1
Number of Chiropractors .....	2
No Suits.	

Each physician gives part time to any clinic or welfare work put on.

Have one school nurse, society strong.

Seminole County Medical Society averaged 87% in attendance for the year.

We have met monthly, with interesting programs, and each member is interested in the society and we feel that it is much better that we have our own society rather than to be jointly with Orange County.

Yours very truly,

(Signed) J. T. DENTON, M.D., Sec'y.,  
Seminole County Medical Society.

*Volusia County*

Report of the Volusia County Medical Society, 1928-1929:

Number of physicians in county .....	48
Number of members in society .....	39
Number of irregulars in Daytona Beach .....	10
Number of irregulars in DeLand .....	5
Number of meetings held during year .....	9
Percentage of members present during year .....	46%
Highest percentage, December meeting .....	70%

As far as my knowledge goes, there has been one lawsuit against an irregular, but as this was in DeLand, I do not know names, dates.

At various times during the year, public health problems have been taken up, including district nursing, school nursing, etc. One in particular, when the Florida Public Health Association sent representatives to a meeting, asking us to aid in making a "T. B." survey. The society did not go on record as endorsing this survey, for the reason that we felt that such activities should come under and be delegated by the State Board of Health. We were willing, individually, to cooperate, giving our time and knowledge if we were asked to do so by proper authority and not imposed upon, by those able to call upon the regular physician.

We were also asked to fix a rate to conduct an examination on all school teachers. This was held under advisement until we could ascertain whether the complete examination included not only a general examination but also a personal examination of the pelvic viscera, and included all clinical laboratory examinations that might be necessary or indicated. This report has not been completed as yet.

We have taken in two new members by transfer.

Definite scientific papers for the year number one, but at each meeting a scientific group problem has been taken

up and discussed, either specifically by several men or as a round table.

Regular time of meeting is the second Tuesday of each month. Meeting place, the three towns of Volusia County in rotation.

Officers for the year 1929 were elected and are as follows:

J. B. Davis, Daytona Beach, President.

R. L. Miller, Daytona Beach, Vice-President.

J. Ralston Wells, Daytona Beach, Secretary-Treasurer.

The officers have had several meetings.

Several policies for the year 1929 have been put into effect, chief of which is the formation of a definite program at least one month in advance of the regular meeting, at which meeting prepared paper or papers will be read and discussed.

During the past year the Ladies' Auxiliary has been formed, and meet the same evenings as the society, although separately. This, we feel sure, has helped to bring up our attendance.

It would not be right to send in a report of the Volusia County Medical Society for the year without mentioning the Halifax District Hospital in Daytona Beach. This hospital has a capacity of 125 beds, is fully equipped with all manner of up-to-date appliances, including complete medical and surgical units, diagnostic and treatment X-ray, and clinical pathological laboratory, equipped to do all modern technical tests. The hospital has been very successful, taking into account that it is its first year, and that it is a hospital of ultra-modern methods second to none in the state of Florida, and thus its initial and maintenance cost is greater than a smaller or less well-equipped one might be. It has had over 1200 patients its first year, maintains an accident department, but no regular dispensaries. Its maternity department has had 100 deliveries the first year.

(Signed) J. RALSTON WELLS, Secretary-Treasurer,  
Volusia County Medical Society.

In submitting the above report, I desire to congratulate our President on his successful administration of our State Association.

EIGHTH DISTRICT—G. C. TILMAN . . . Gainesville  
Putnam, Levy, Baker, Bradford, Union, Flagler, Alachua.

The eighth district is composed of seven counties, Putnam, Levy, Baker, Bradford, Union, Flagler and Alachua.

This district has two active medical societies located in Putnam and Alachua counties; the remainder of the district is sparsely settled, with very few physicians, and owing to the geographical arrangement of the district, it is not feasible to expect the physicians of the remaining counties to join in with a distant county society when another active society is more accessible.

This district extends from the Gulf of Mexico to the Atlantic Ocean and from the Jacksonville-Lake City Highway on the north to the Withlacoochee River on the south. Therefore you will understand the reason for so few societies.

In order that we may reach the men who are scattered over this vast territory, I would recommend that this district be changed so that the counties without societies or any prospect of one would be included in the district nearest them.

NINTH DISTRICT—D. M. ADAMS . . . Panama City  
Holmes, Washington, Bay.

No report.

TENTH DISTRICT—HERMAN WATSON . . . Lakeland  
Polk.

No real effort has been put forth to collect dues for 1929, but the secretary of the society will urge every member to pay up before the annual meeting in April.

There is a kindly feeling toward organized medicine throughout the district, and the meetings have been interesting and instructive.

As a whole, the district is on a better basis than ever before.

# ELEVENTH DISTRICT—R. J. HOLMES . . . *Miami Dade.*

The past year has been one of transition for organized medicine in Dade County. Probably the most noticeable change has been in the character of the work done by physicians in this community. The "hurly-burly" boom days have passed. The medical men have a much closer and more personal contact with their patients. The time element does not confuse him in the study of his cases, and one may safely say without fear of contradiction that the medical and surgical work being done in Dade County will compare very favorably with that of any other section of the country. This is in part due to the fact that a number of men of proven ability and prominence have located in Miami within the past two years. The visitor who once complained that the Florida doctor was mercenary and who greatly preferred having his physical being cared for by the physician "back home," now realizes that his recuperative powers are greater here and no longer looks upon us with suspicion. Surely, this is a step forward for organized medicine in Dade County.

The Dade County Medical Society has been a "live wire" under the leadership of Doctor Walter Jones. The programs have been excellent and the meetings well attended. The scientific and highly beneficial staff meetings of three of our leading hospitals have not interfered in the least with the loyalty of its members. Several social meetings have been held. The society has been entertained royally by the Dade County Woman's Auxiliary, and, at the annual banquet, Doctor Rosenow, of the Mayo Clinic, was our guest of honor.

The outstanding accomplishment of organized medicine in this section undoubtedly has been the selection of Miami as the next meeting place of the Southern Medical Association. All Floridians should take their hats off to that "handful" of men who finally arrived in Asheville, there to fight again the "battle above the clouds," and who "brought home the bacon" against tremendous odds. These men are unanimous in their praises for their brothers from other sections of the state who aided them. The Dade County Medical Society realizes that their success was made possible by the excellent support of men from Jacksonville, Tampa, and other Florida cities.

At the December meeting, Doctor Charles Cleghorn was elected President and Doctor Robert Harris re-elected Secretary of the society for the coming year. Doctor Cleghorn is a real leader, with a wonderful personality, and it is doubtful if anyone could have been selected who could better fill his shoes during the coming year. It is characteristic of him that he has already gone to work for the "Southern."

Your councilor regrets that he cannot report any personal accomplishments for the good of organized medicine. He has contented himself with "rounding up" a few "stragglers" and bringing them into the fold, and is glad to report they are now enthusiastic workers for the society.

Organized medicine in this community has not had smooth sailing during the past year by any means. The question of whether or not physicians should be allowed the privilege of serving on the active staff of more than one hospital came very near disrupting our organization. Whether or not nurses should be required to serve twenty-hour duty and the question of maintaining our own nurses' registry and physicians' exchange were other danger signals that have not been entirely eliminated.

As a whole, it has been a very profitable year. Your councilor, however, feels that it is his duty to utter just a word of warning here: It is only a personal opinion for which he assumes the entire responsibility.

A few years ago, the feeling of friendship and of real fraternal spirit among the profession in Miami was a model for any city. The frictions and factions, clicks and clans, so common in other communities, were unheard of here. One of the things that added, more than anything else, to the pleasure of living and practicing here

was the fact that these things did not exist and that the profession existed only as "one big family." We are not quite so busy now. We have more time to look down the hall and see what the other fellow is doing. Jealousy is creeping in, and the men are prone to speak less enthusiastically of their colleagues. This feeling should and must be corrected.

# TWELFTH DISTRICT—W. B. WINKLER . *Ft. Myers* Glades, Charlotte, Hendry, Lee, Collier. No report.

# THIRTEENTH DISTRICT— JOSEPH W. TAYLOR . . . . . *Tampa* Hillsborough, Hernando, Pasco.

I am very sorry that as councilor of this district I was unable to attend the meeting in Orlando, also to get my report in on time.

I visited the Pasco-Hernando-Citrus Medical Society which was meeting at Inverness three weeks ago. They have very lively society meetings once a month in the different towns in the three counties. They hold their meetings at night. Some doctor acts as host to the society at these meetings. They had a very interesting meeting the night I attended. Several interesting cases were reported with laboratory and X-ray findings. They claim that every man in these three counties who is eligible belongs to the society. They are planning to take in Sumter County. This county has a medical society which is not functioning. I advised that they take them in, if agreeable to the men in Sumter County. There should be a change in the councilor in this tri-county society, as you know Citrus County comes under the councilor of the fifth district and the other two counties under the thirteenth district. The Hillsborough County Medical Society has done very well the past year. There were eighteen papers read, several distinguished visitors present during the year, and numerous cases reported during the year.

# FOURTEENTH DISTRICT— ROBERT L. KENNEDY . . . . . *Malone* Calhoun, Jackson, Gulf.

No report.

# FIFTEENTH DISTRICT— W. E. VAN LANDINGHAM . . . . . *West Palm Beach* Palm Beach, Broward.

Districts comprised of Broward and Palm Beach counties have enjoyed a good year and the medical profession as a whole seems to be closer together and more determined in its efforts to promote organized medicine.

Broward County has a membership which remains well up to the 100% mark and have held meetings regularly with many good papers on their programs. They have been very active in attendance and also in lending their assistance to the welfare of all other county societies on the east coast. As conditions improve, this county bids fair to make more strides than at any time since the boom period and the handicap incident to the recent storms.

The Palm Beach County organization is in better shape than in several years, all members working in harmony for the betterment of our local and state organization. Good men have been elected to the offices for the coming year and the President is particularly active in his efforts to put over instructive and interesting programs which will bring out the members at each meeting. We hope to report 100% paid-up members by the time the State organization meets in April and are working very hard to that end at this time. This district has suffered untold hardships for the past few years and it is remarkable to be able to state that during all that time the societies have remained more or less solidly together, and are now emerging from that situation into a more concrete organization than ever before. We are looking forward to the future with more encouragement as we note the forward strides made by our profession as a whole in this state.



Our President, Dr. Frederick J. Waas, has done good work for our district, and we were very sorry not to have had him with us at a time when he was already booked to be present and sickness prevented. The councilor for this district is pleased to state that it has been a great pleasure to work with him, and stimulus to greater activity has been in a great measure due to his enthusiasm and efforts.

We expect to have a large attendance from our district at the annual meeting in St. Augustine in April.

**SIXTEENTH DISTRICT**—W. J. CALVIN . . . *Eustis*  
Sumter, Lake.

No report.

**SEVENTEENTH DISTRICT**—L. C. INGRAM, *Orlando*  
Osceola, Orange.

The seventeenth district, composed of the counties of Orange and Osceola, is well organized. Osceola has no local county society, having but a small number of physicians, but these men united and worked most loyally with the Orange County Society. There are but two or three eligible doctors in the two counties not affiliated with the Orange County Society and State Association. The membership at the close of the year consisted of fifty-two regular and four honorary members. Four new members had been admitted and two had received demits during the year.

Twelve regular meetings were held during the year, in which there was a total attendance of 370, or an average attendance of 50 per meeting. The society is proud of this record, for it shows the spirit of the men to get together. There was always a lively spirit in the discussion of papers presented, which must make the society and its meetings of considerable value to the individual member.

The scientific program for the year consisted of thirteen papers, nine of them delivered by members of the society and four by men outside the counties.

The society has interested itself in a number of very worthy activities during the year, two of which I might mention. First, the officers of the local Bell Telephone Company approved and placed in the classified list of their directory a list of physicians and surgeons as members of the Orange County Medical Society, and stating as such. We were informed that this plan had been adopted by many societies through the country since.

Second, an arrangement was perfected with the local broadcasting office for members to give a talk once a week on health topics. This displaced a plan being operated by a set of irregulars.

**EIGHTEENTH DISTRICT**—  
DAVID R. KENNEDY . . . *Sarasota*  
Manatee, Sarasota.

The past year in the eighteenth district, embracing Manatee and Sarasota counties, has not been noisy.

Manatee County's society meets at the Dixie Grand Hotel on the first Tuesday of each month and one or more papers are presented. There are nineteen members at present; about fifty per cent of whom attend regularly; four members, Drs. Overstreet, Cowell, Haygood, Withers, have moved to other localities and Dr. Luke has not practiced for several months because of ill health. Dr. T. C. Clark has moved to Bradenton from Georgia and it doing eye, ear, nose and throat work.

Sarasota County Society has fourteen members, which includes all except one doctor in the county. Seventy-five per cent of the members attend the regular monthly meetings, at which one or more scientific papers are read and discussed. During the past month we had a very instructive paper on "Bronchial Asthma," by Dr. Milton Cohen, who is head of the Hay Fever and Asthma Clinic at Cleveland, Ohio. We are hoping to have a joint meeting at Bradenton of the Sarasota, Arcadia and Manatee societies in the near future, and have Dr. Fred Albee present motion pictures of his operative technique.

**NINETEENTH DISTRICT**—  
C. H. KIRKPATRICK . . . *Arcadia*  
DeSoto, Hardee, Highlands.

The nineteenth district is composed of three counties, which have joined together to form one county society, as they are all small counties and individually have small memberships, but collectively make up a very creditable membership. There is a monthly meeting rotating in the different cities in the counties.

The membership includes almost 100% of the eligible men, and the attendance is excellent at the monthly meetings. For 1928 the dues were all paid except one, and for 1929 we expect to be 100% in paying our dues.

There has been much interest shown in organized medicine in our society throughout the past year.

**TWENTIETH DISTRICT**—  
WILLIAM R. WARREN . . . *Key West*  
Monroe.

I am happy to report now that after three years of deep coma, the Monroe County Medical Society has come to, and I trust, the period of lethargy gone forever.

I personally called on each member of the County Medical Society and obtained a promise from each individual that he would attend a meeting at my home. Had it not been for the illness of one member and the extreme illness of another member's mother, I am sure we would have had a 100% attendance. However, only two were absent, and prospects are bright for a functioning organization once more.

Definite plans are already perfected for a general meeting, monthly, of the medical profession here, represented by the Marine Hospital, Navy and civilian physicians and surgeons. At these meetings, interesting and instructive cases will be discussed, papers read and anything concerning our profession's progress and profit may be considered. Such an activity will make the meetings interesting and I hope stimulate the enthusiasm of our membership to a greater degree than ever before.

At the last meeting on January 22nd, Dr. William B. Keating was elected President, Dr. Nilo C. Pintado, Vice-President, and myself, Secretary-Treasurer. Since the society Secretary has the work of the organization to do and is usually responsible for the meetings and programs, I decided to accept the secretary job for a year and endeavor to have an active society that would conserve the interests of both county and state organizations.

**TWENTY-FIRST DISTRICT**—H. D. CLARK, *Ft. Pierce*  
St. Lucie, Okeechobee, Indian River, Martin.

As councilor for the twenty-first district, which includes the counties of Indian River, St. Lucie, Okeechobee and Martin, I wish to submit the following as my report for the year of 1928:

We have one medical society, which is called The Four County Medical Society. We meet on the fourth Thursday evening of each month, alternating so that we meet in Ft. Pierce, Okeechobee, Vero Beach and Stuart, have luncheon, business and a scientific meeting. Dr. J. A. Newnham, of Stuart, is President, Dr. C. L. Davis, of Okeechobee, is Secretary and Treasurer.

The towns are rather far apart, so it makes it rather hard to get a very large number of the men together at one meeting, but we have had some very good meetings during the year, which I feel have been of great value to us all, especially from the social and fraternal standpoint. We have also had read before the society several good scientific papers from the local members and some from doctors of other county societies who have visited us.

We have in this Four County District eighteen regular physicians, of which seventeen are members of the society, but three of these have not paid up their dues at the date of this report, but feel sure they will do so at our next meeting in February.

We have lost two of our members this year on account of moving to other sections of the state to live.

As many of us possibly expect to attend the meeting in St. Augustine in April.



## STATE NEWS ITEMS

The following program was rendered at the January meeting of the Pinellas County Medical Society:

"Tularemia of Unusual Origin," Dr. J. A. Mease, Dunedin.

"The Intra-Nasal Use of Pituitrin," Dr. W. D. Anderson, Largo.

\* \* \*

At the regular meeting of the Sarasota County Medical Society held January 28th, the following officers were elected to serve for the year 1929:

Joseph Halton, Sarasota, president.

J. C. Patterson, Sarasota, vice-president.

Frank C. Metzger, Sarasota, secretary-treasurer.

A report from two committees upon "The Present Influenza Epidemic" was read by the local Health Officer. J. C. Foster, D.D.S., a guest of the Society, spoke on "Modern Cooperation of Physician and Dentist." Refreshments were served.

\* \* \*

At its annual meeting, held February 1st, the Mound Park Hospital Staff of St. Petersburg, elected the following officers: Chief of staff, O. O. Feaster, St. Petersburg; vice-chief of staff, R. H. Knowlton, St. Petersburg, and secretary, N. W. Gable, St. Petersburg.

\* \* \*

The February meeting of the Lake County Medical Society was held at Eustis on the 7th, with a good attendance in evidence. Dr. C. W. Roberts of Atlanta, Ga., and Dr. R. C. Strode of the State Board of Health, Melbourne, were guests of the Society at this meeting.

\* \* \*

Dr. Prescott LeBreton, Daytona Beach, who has recently become affiliated with the Volusia County Medical Society, has left for Buffalo, N. Y., where he will spend the summer months. Dr. LeBreton expects to return to Daytona Beach this fall to resume practice.

\* \* \*

NOTICE! If you are planning to attend the Fifty-Sixth annual meeting at St. Augustine, the hotel managers would appreciate advance notice. Both the Ponce de Leon and the Alcazar will have ample room. Make reservations direct with hotel where you wish to register.

The following firms have arranged for exhibits at the St. Augustine meeting:

## EXHIBITORS

American Optical Co. ....	Southbridge, Mass.
Cameron's Surgical Specialty Co. ....	Chicago, Ill.
H. & W. B. Drew Co. ....	Jacksonville
Galeski Optical Co., The S. ....	Richmond, Va.
Guyer X-Ray Co. ....	Jacksonville
Kelley-Koett Mfg. Co., Inc. ....	Covington, Ky.
Lederle Antitoxin Laboratories ....	New York
McMurria (Franklin) Motor Co. ....	Jacksonville
Mead-Johnson and Co. ....	Evansville, Ind.
Miltner Laboratories, Inc. ....	Philadelphia, Pa.
Mosby Company, The C. V. ....	St. Louis, Mo.
Stephenson Brace & Limb Co. ....	Jacksonville
Surgical Supply Company ....	Jacksonville
Victor X-Ray Corp. ....	Chicago, Ill.

\* \* \*

The Executive Committee of the Dade County Medical Society is determined to make the meeting of the Southern Medical Association in Miami the largest and best conducted meeting ever held in the history of the organization. The general chairman as well as the chairmen of the various committees have already been appointed. The plans for the meeting have been carefully determined very much along the same lines as the Shrine Convention. All Dade county physicians will be in white and will wear insignia which will proclaim them hosts for the occasion. Every train will be met by committees and the visitors will be escorted to their hotels. Plans are being made to have several outstanding speakers give public addresses on health problems. If the weather permits, these addresses will be given during the evening in the Bayfront Park. The convenient arrangement of having the entire meeting within one block is ideal. Miami is up to her old tricks again and it seems that they are going to give the rest of the country something to shoot at.

\* \* \*

The regular meeting of the Sarasota County Medical Society was held February 12th at the Whitfield Country Club. The meeting was attended by seven members of the Manatee County Society and five members of the Sarasota County Dental Society. The guest of honor was the president of the Florida Medical Association, Dr. Frederick J. Waas. Interesting case reports were presented; a discussion on influenza complications and treatment followed; a short treatise on "Cough" was given by Dr. T. W. Taylor of Sarasota and the president's "Message to County Societies" was delivered by Dr. Waas. The concensus of opinion was that our state president was well chosen and well fitted for that post of honor.

The Central Florida Medical Society met in regular semi-annual session at Gainesville, on February 14th, at Hotel Thomas. The entertainment was provided by the Alachua County Medical Society. There was an exceptionally large attendance. The scientific program was as follows:

"Tularaemia—Case Report," Dr. G. C. Tillman, Gainesville.

"Congenital Atelctasis as Distinguished from Certain Other Birth Anomalies," Dr. J. D. Love, Jacksonville.

The officers elected for the ensuing year were as follows:

S. C. Wood, President, Leesburg.

W. C. Thomas, Vice-President, Gainesville.

H. C. Dozier, Vice-President, Ocala.

J. M. Willis, Vice-President, Williston.

Wm. J. Calvin, Vice-President, Rustis.

H. S. Cherry, Vice-President, Center Hill.

J. L. Chalker, Secretary-Treasurer, Ocala.

The next meeting is to be held in Lake County, at a place to be selected.

\* \* \*

The Polk County Medical Society held their regular meeting at the Morrell Memorial Hospital in Lakeland, on Wednesday evening, February 13th. Dr. Frederick J. Waas, president of the Florida Medical Association, was present and delivered an address, "The Value of the County Medical Society." This was a very timely address and many comments have been heard since then. Dr. H. Mason Smith, past president, Dr. John S. McEwan, past president, Dr. N. L. Spengler, president of the Florida Midland Medical Society, and Dr. T. F. Jackson, president of the Hernando-Pasco-Citrus county society, were there and spoke to the society. The question of the basic science law was discussed and a committee was appointed to draw resolutions requesting the Florida Medical Association to use its influence to impress the lawmakers of the state of the importance of a matter of such vital importance to the State of Florida. Another meeting of the Society is to be held on the 13th day of March at which time Dr. H. Mason Smith, Dr. John S. Helms, and Dr. Herman Watson will address the society and their guests, who will be the senators and representatives of Polk, Hillsboro, Hardee, Highlands, DeSoto, Lake and Sumter counties with the president and secretary of these societies, on the importance of this law.

The Pinellas County Medical Society met in regular session on February 22nd at the Y. M. C. A. Building, St. Petersburg. The following program was presented:

"The Conservative Treatments of Gonorrhea," Dr. J. F. Cranford, St. Petersburg.

"Diverticulosis and Diverticulitis of the Intestine," Dr. John A. Herring, St. Petersburg.

\* \* \*

The St. Johns County Medical Society held an extremely interesting meeting at the home of Dr. G. W. Potter, Tuesday evening, February 26th. The different committees working on local plans for the fifty-sixth annual meeting of the Association made reports indicating that much time had been spent by the individual members in the preliminary work. The meeting was most interesting and showed a very unusual enthusiasm of its members. Out-of-town guests attending were Dr. Shaler Richardson, secretary-treasurer of the Association; Dr. Harold D. Van Schaick, and Dr. Stewart G. Thompson, business manager, of Jacksonville, and Dr. E. W. Warren of Palatka. Dr. Frederick J. Waas, president of the Association, had made arrangements to attend but was stopped on his way over and 'phoned that unavoidable circumstances had arisen which made it impossible for him to continue the trip.

\* \* \*

Dr. J. M. Anderson of Cross City recently visited Atlanta where his son, Clyde, is attending Emory University Medical School.

\* \* \*

Dr. Archie McCallister of Tampa recently received the appointment of medical examiner for the United States Veterans' Bureau, Tarpon Springs District.

\* \* \*

Dr. Benjamin F. Eckman of Homestead and Mrs. Irene H. Bril of Covington, Ky., were recently married at Florida City.

\* \* \*

Dr. George A. Munch was recently found guilty by a federal court jury of issuing fake medical diplomas and licenses and was sentenced by Judge Lake Jones to serve five years in the Atlanta penitentiary and pay a fine of \$1,000.00. The verdict is the second conviction against Dr. Munch in the "diploma mill" case. He was convicted in 1927, but the United States circuit court of appeals ordered a new trial. Dr. Munch was formerly secretary of the State Board of Eclectic Medical Examiners.

The American College of Physicians will hold its Thirteenth Annual Clinical Session in Boston, April 8-12. Dr. Charles F. Martin, Dean of the Faculty of Medicine, McGill University, is President of the College this year, and Dr. John H. Musser, Professor of Medicine at Tulane University Medical School, is President-elect and will be inducted to the Presidency toward the end of the Boston meeting. Dr. James H. Means, Jackson Professor of Clinical Medicine at Harvard Medical School and Chief of the Medical Service at the Massachusetts General Hospital, is General Chairman of all Boston Committees having charge of arrangements for the Clinical Session of the College in April.

The program provides hospital visits, clinics, demonstrations and ward-walks during the forenoons at fifteen different Boston hospitals, and for general scientific sessions each afternoon and evening in the assembly room of the Hotel Statler, which will be headquarters. Eminent authorities in their special lines will present the results of their work before an audience competent to appreciate the value of the contributions.

A Symposium on Deficiencies will take place the first evening of the session, and will be of particular interest because of the fact that deficiencies are nowadays assuming a far more widespread and important role than had heretofore been anticipated. They have come into their own as factors producing acute and chronic disease on a par perhaps with infections. The committee has secured for the program men who can speak with authority on a variety of aspects of this important subject.

Another special feature is a review of the Present Status of Vaccine and Serum Prophylaxis and Therapy, designed to give the internist a rapid survey of the field. The speaker, Dr. Benjamin White, of Boston, is an authority on these subjects and can give the high spots in rapid and yet forceful fashion.

The annual banquet of the College will be held Thursday evening, April 11, when Dr. George E. Vincent, President of the Rockefeller Foundation, will deliver the chief address. The Convocation, for the conferring of Fellowships, will take place Friday evening, April 12. Dr. Charles F. Martin, of Montreal, will deliver the Presidential Address.

Programs and details concerning reduced fares, admission, etc., may be secured from the Executive Secretary, E. R. Loveland, 133-135 S. 36th Street, Philadelphia, Pa.

## Lac-Bismo

(HART)

See Description, Journal A. M. A.  
Volume XLVII, Page 1488

A scientific combination of Bismuth Subcarbonate and Hydrate suspended in water.

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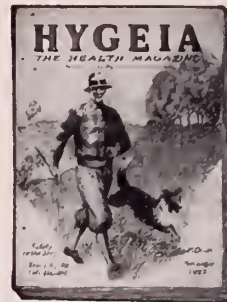
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County Society	Secretary	Date	MEETINGS			Dues Paid.
			Time	Place	Luncheon?	
Alachua .....	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	68%
Bay .....	J. M. Whitfield, M.D., Panama City.					50%
Brevard .....	I. K. Hicks, M.D., Melbourne.	Varies		Varies		67%
Broward .....	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Commerce	No.	36%
Columbia.....	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		100%
Dade .....	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	32%
DeSoto-Hardee-Highlands ...	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	
Duval .....	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Duval County Hospital	No.	70%
Escambia .....	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	66%
Hamilton .....	R. A. Barnett, M.D., White Springs.					
Hillsboro .....	Frank T. Barker, M.D., Tampa.	1st and 3rd Tuesdays	8:00 P.M.	City Hall	No.	
Jackson .....	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	
Lake .....	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	43%
Lee .....	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	35%
Leon-Gadsden-Liberty-Wakulla-Jefferson .....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	64%
Madison .....	Geo. O. Davis, M.D., Madison.					100%
Manatee .....	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	79%
Marion .....	Theo. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	62%
Monroe .....	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	86%
Orange .....	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	58%
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	
Pasco-Hernando-Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Tuesday	8:00 P.M.	Varies	Yes.	79%
Pinellas .....	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	Y. M. C. A. Bldg.	No.	96%
Polk .....	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	
Putnam .....	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	62%
St. Johns .....	W. E. Burnett, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeechobee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.					
Sarasota .....	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	
Seminole .....	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		83%
Sumter .....	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	40%
Suwannee ....	W. C. White, M.D., Live Oak.					86%
Taylor .....	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia .....	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	28%
Walton-Okalosa ....	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
*Washington-Holmes .....	W. C. Harper, M.D., Chipley.					

\*Charter pending. NOTE—(Secretaries: Please submit information to complete the above schedule.)

## TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL  
TUBERCULOSIS ASSOCIATION

Statistical and clinical research within the last few years has brought into sharp relief the problems of tuberculosis among young men and young women between the ages of 15 and 25, including those in high school and in industry. Many theories that might account for the lag in the reduction of tuberculosis among adolescents and youths, have been advanced, but none have been proved. At present, the facts are too meager to serve as a basis for specific action.

## THE NEGLECTED AGE

While the mortality from tuberculosis in general had declined 36 per cent in the last decade, the tuberculosis death rate at ages 15 to 25 had declined only half that amount. The greatest decline was shown for children under 5, their tuberculosis mortality having been reduced over one-half in the decade. In the age-period 25 to 44, the rate had declined 42 per cent. For children aged 5 to 14, the decline was almost the same.



Poster in three colors designed to interest high school students

Even the mortality of older persons past 65 showed a decline of 31 per cent. The young group, 15 to 24, alone had made little progress.

Classification according to sex shows great disparity between males and females. For the 15-19 group, the death-rate for girls is about 75 per cent higher than that for boys, and at ages 20-24, the women have a death-rate 20 to 25 per cent

(Continued on page 466)

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☞ *Evidences that medical and scientific men are leading a swing toward sanity in diet.*

DIETARY opinion in the United States in recent years has been swept by numerous nation-wide food fads, most of them ludicrous, many of them harmful. The craze for slimness, exposed as dangerous by many physicians, is an example. The fad for eliminating sugar from the diet is another.

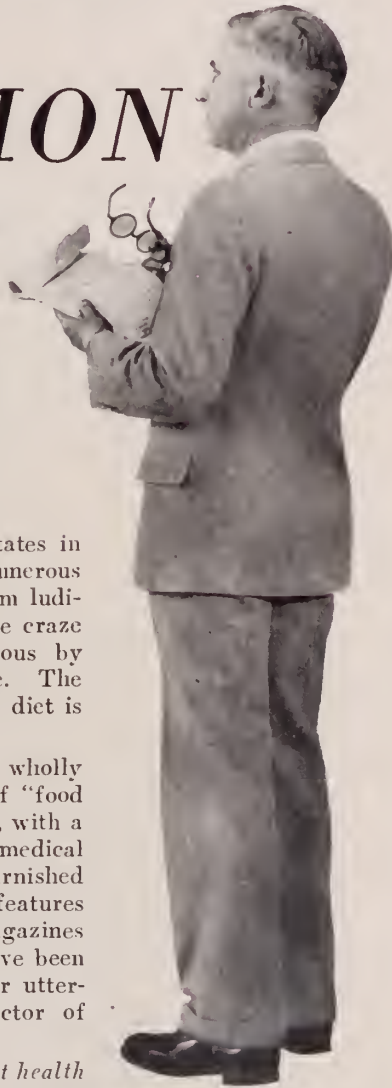
Diet misinformation cannot be wholly blamed on the public. A swarm of "food extremists," laymen and laywomen, with a smattering of terms gleaned from medical and scientific publications, have furnished an endless supply of articles and features to the newspapers and popular magazines and radio. These "authorities" have been read and heard by millions. Their utterances have had the attention factor of sensational interest.

*It is a dangerous policy to entrust health education to lay writers. It is time for medical and scientific authorities to eliminate the dangers of faddism with precepts of intelligence and common sense.*

There are evidences that medical and scientific men are leading a swing toward sanity in diet. Twelve medical specialists and dieticians recently prepared a symposium exposing the dangers to men, women and girls of starvation diets and "reduction treatments," so called, for slimness.

"The most delicate parts of the body are always the ones to suffer first," says one of the medical specialists. "Keep children and young people well nourished and up to weight," says another.

Medical directors before an eastern tuberculosis conference recently warned of the dangers of under-dieting of young girls. "The most difficult



problem," said one of the directors, "facing us in combating tuberculosis among high-school girls, and particularly among the young flappers of today, is the serious habits they practice to retain or acquire a slim and graceful figure. . . . The problem of nutrition is the one we have to face in our treatment of girls of this age. It is at this age that girls are most susceptible to tuberculosis and other diseases."

A research food biologist, at one of the great universities, recently said: "Sugar is a carrier for roughage in the diet — mineral salts, mineral ash, and fruit vitamins. Sugar modifies the harsh fruit acids and makes the fruits palatable. It

does not injure or change in any way the delicate compounds. At least 90% of constipation is due to a lack of roughage. Eat bran, fruits and vegetables sweetened to taste."

The ranking biological chemist at another great university recently said: "Sugar is nature's incomparable flavoring agent. Sugar is one thing that relieves the deadly dullness of our overly refined foods. Also, sugar is wholesome and the most inexpensive condimental food in the world."

Sanity in diet calls for varied roughage foods. In addition to milk and milk products, young people and adults should eat a varied diet of cereals, fresh or canned vegetables and fruits. Sugar makes these healthful foods enjoyable. The Sugar Institute, 129 Front Street, New York, N. Y.



higher than the men. This disparity has been visible in the United States figures since 1900, but the variations have become greater in recent years.

The same phenomenon has been noted by Green, who made an analysis of the tuberculosis mortality of Cleveland; *viz.*, that the mortality among females aged 15-24 was considerably higher than for men of the same ages and that their mortality was decreasing much more slowly.

The Metropolitan Life Insurance Company finds that the excess of mortality of young females did not appear in their figures until about 1915. Their comment is as follows: "Contemporaneous with a declining death-rate, something has occurred within the past fifteen years to cause the mortality among the young white women to be higher than that of young white men."

These phenomena are made more striking by comparison with the figures for England and Wales. The decline in the general tuberculosis death-rate has been similar for both countries, being somewhat accelerated in the United States. But from a recent analysis of the age and sex incidence of English figures by Cobbett of the University of Cambridge, he concludes that "the decline (in tuberculosis mortality) has been smallest in childhood and old age, greatest between 15 and 25 . . . . Between 15 and 25 . . . young women benefited rather than the young men."

The problems of mortality of this young group are not peculiar to tuberculosis alone. A recent analysis of heart disease figures shows that, in the last ten years, heart disease has *declined* in every age-group up to age 45 except young people aged 15 to 24.

Various causes are adduced by many writers. The increased industrialization of women which took place during the war years, the extra-curriculum activities of high school and college students, the physiological changes following the adolescent period, the dieting fad—all these in varying degree may have had their part in the result. It is, perhaps, trite to say that the group of young people aged 15 to 24 is the one which must "carry on" for the entire country. We have intensive health activities and services for the infant, the pre-school child, elementary school children, mothers, men in industry, and yet these millions of boys and girls and young men and

(Continued on page 468)

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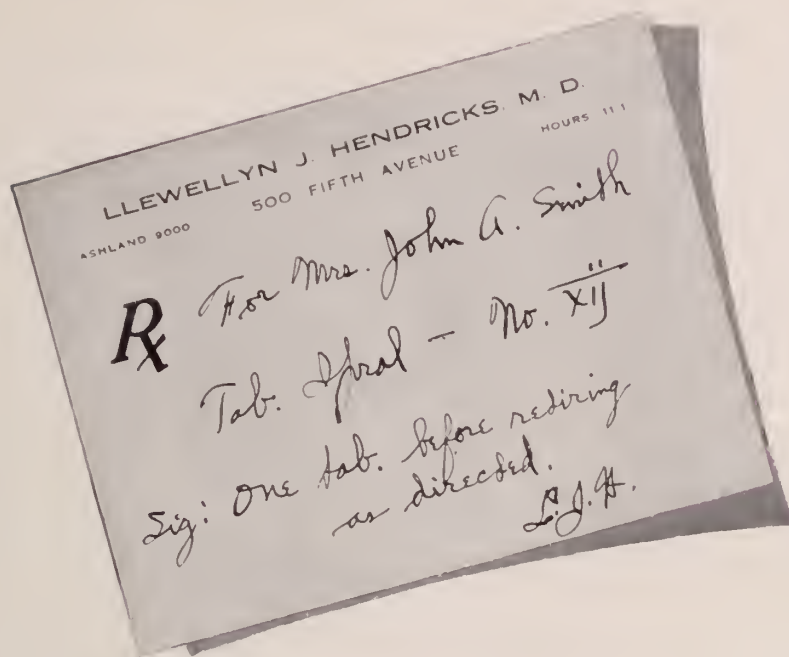
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\*Jackson, D. E. and Lurie, L. A.: Experimental and clinical observations on the actions and therapeutic uses of ethylisopropylbarbituric acid. *Jour. of Laboratory and Clinical Medicine*, 11:116.

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women, who are making all their adjustments to life at this critical period, are left untaught in regard to health. Surely, a neglected age.—*Jessamine S. Whitney, Health in High Schools, Nat. Tuber. Assn., 1927.*

#### TUBERCULOSIS AMONG HIGH SCHOOL STUDENTS

The author, during recent years, has examined a large number of high school students in Chautauqua County, New York. Of the first thousand examined, 1.3 per cent were found to have tuberculosis of the lungs, either in a healed or active state. A relatively large part of the active cases were athletes engaged in the major sports. Seventeen were listed as suspects. One per cent of the student body had heart complications. More than 22 per cent had enlargement of the thyroid gland.

When tuberculosis is found, those who control to any great extent the activities of the group are so notified. The parents are informed as to the proper care of the children, and the school authorities have been most cooperative in their efforts to prevent overwork of those affected.

Thus far, all but the active cases have been kept in school, and yearly re-examinations show that most of them are doing well. The plan outlined would seem to preclude the possibility of damage through mental or physical strain sufficient to produce a relapse of the disease. The present tendency in schools is to push the students to the limit of their mental capacities, and the student with a keen mind is urged to take on additional study loads in order to finish the grades at an earlier age. Such a plan may be commendable for healthy children, but it certainly is not conducive to the health of those who are below par physically. The examination of the school children has been a very real help in dissipating certain of the terrors which tuberculosis formerly had in the minds of many of the people.

Many of the cases found during school examinations are destined to become the active cases of the future if they fail to carry out proper precautions at this time. Judging from the histories of many young adults admitted to the Newton Memorial Hospital, the writer feels sure that pulmonary tuberculosis, probably in a healed state, could have been demonstrated during their high school careers, had they been properly examined for the disease.

The writer's present plan is to examine all high school seniors and arrange for the examination (Continued on page 470)

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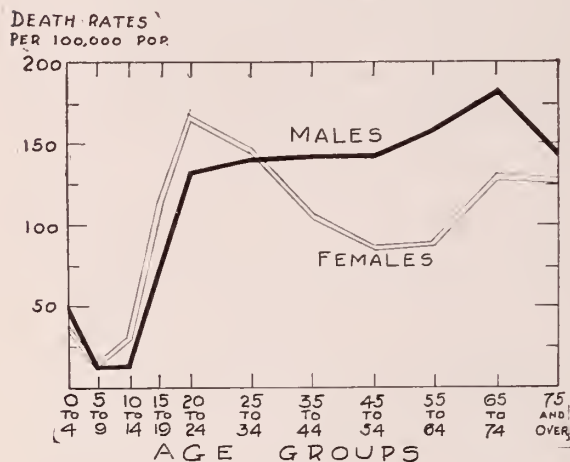
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tion of every pupil applying for working papers. If possible, he hopes to make the securing of working papers contingent upon physical and X-ray examinations of the chest. If the disease is not recognized at this time, a relapse is likely to occur as a result of changed conditions and the pressure of competition with healthy workers. In addition to the seniors and students leaving school, "contacts" and those with symptoms in the past are examined, in the hope that eventually the grades will be reached and the entire school population covered. Wide use of the X-ray is necessary in school examinations. If funds are available, every student should be pictured. Such a policy will prove to be a wise investment of public funds.

### Deaths from Tuberculosis by Age and Sex Groups

U. S. Registration Area, 1923



When a diagnosis of tuberculosis in any form is made on a child, a thorough study of the family unit should follow. If all members of the family are alive, such a procedure is very likely to lead one to a tuberculous parent and possibly infected brothers and sisters.

The public school is one of the most important fields in the control of tuberculosis, and its potential resources of clinical material should be thoroughly exploited. When such a policy is universally adopted and is considered as essential, rather than an "extra part" of case-finding machinery, then we will approach with greater strides that day of all days when the great white plague is mastered and is no longer a menace to human kind. —*Tuberculosis among High School Students, Walter L. Rathbun, M.D., Jour. of the Outdoor Life, Jan. 1927.*

(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)



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VOLUME XV  
NO. 10

Jacksonville, Florida, April, 1929

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### CONTENTS

	PAGE		PAGE
President's Address .....	485	Scientific Assembly .....	503
Proceedings of the Fifty-Sixth Annual Meeting of the Florida Medical Association, Inc.:		Third General Session .....	503
First General Session .....	488	Scientific Assembly .....	504
Second General Session .....	488	Registration .....	505
Report of Secretary and Business Manager.....	491	Presidents and Secretaries of the County Medical Societies .....	507
Report of Executive Committee.....	497	Editorials: (1) Our President; (2) Early Diagnosis of Tuberculosis; (3) A Message from President Henry C. Dozier, M.D. ....	509-512
Report of Committee on Legislation and Public Policy .....	498	State News Items .....	513, 514
Report of Hospital Committee.....	499	Tuberculosis Abstracts .....	516, 522
Scientific Assembly .....	501		
Meeting of the House of Delegates.....	501		

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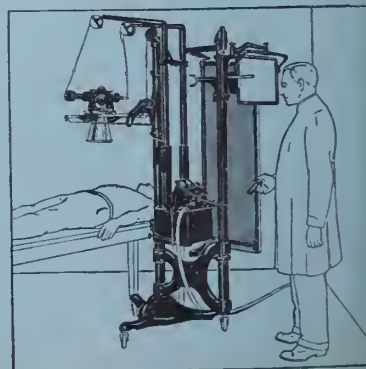
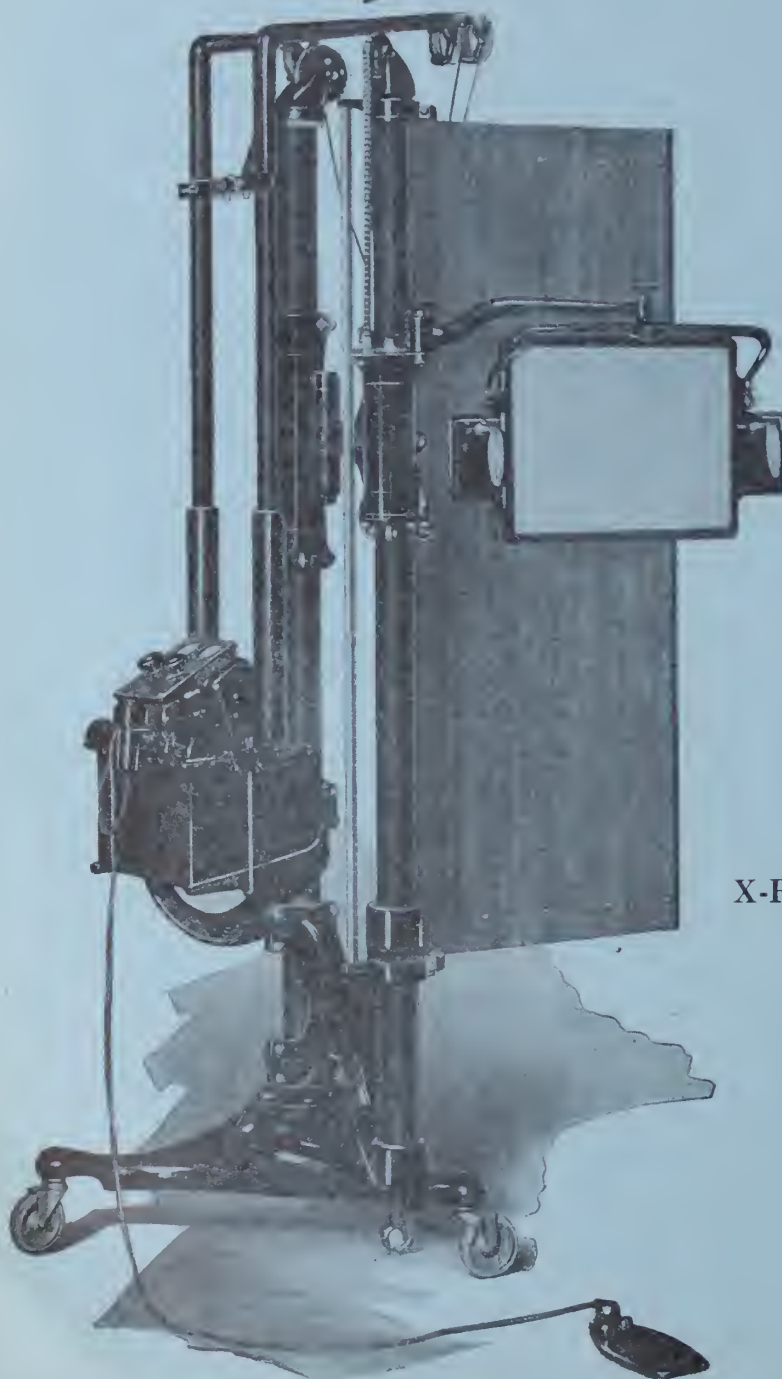
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The old doctor imparted to the other some of his own wisdom, his own patient philosophy of life and service. The younger man, sensitive and a seer in his own right, builded on from his own experience through the practical application of his knowledge of medicine and the personal art of being human and humane.

So into his training passed the long discipline of study and preparation, together with that more rigorous responsibility to answer the summons when duty calls, whenever, wherever or for whatever the need may be.

He may watch for hours upon end without sleep, eat but little, relax never, yet no one hears him complain. No one thinks he ever becomes weary, or longs for a respite and so day or night, in season and out, when the telephone rings a voice carries back, "This is the doctor. Yes, I will come."

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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume XV

Jacksonville, Florida, April, 1929

Number 10

## President's Address\*

FREDERICK J. WAAS, M.D., F.A.C.S.,  
Jacksonville.

*Members of the Florida Medical Association,  
and Guests:*

I wish to preface my remarks by expressing to you both gratitude and regret. For the privilege of occupying the highest office in your gift to bestow, words would be inadequate to express my grateful appreciation. For the honor conferred by the Association and for the courtesy and kindness of individual members, I shall always be profoundly thankful. For my own shortcomings, I have nothing but regret. I have made an effort to visit as many of our County Societies as possible, but I am sorry to say that on many occasions, unavoidable circumstances presented themselves which precluded my accepting courteous invitations to visit societies that I have been unable to reach. However, at some future time I will be very glad to visit the various societies as a member of the Association. I sincerely regret that I could not have done better. My desire to serve was good—my ability to perform limited.

The officers of any organization have one duty, and one only, to perform the work of their offices as faithfully and efficiently as possible. They may have other desires, namely, to sidestep their duty—they may prefer to enjoy the honors and rewards of office without assuming the responsibilities, bearing the burdens or making the sacrifices demanded of every efficient and faithful servant. It has been my desire to perform all duties as well as possible, a privilege for which I am deeply grateful.

The subject I have selected for my address is "Medical Cooperation."

Let us remember that, in public affairs, we must be united and in professional matters we must agree. We must avoid contentions. It is essential that we should be the intellectual pacesetters for our community. We must be able to view the human body as a unified whole; its afflictions must be seen from a broad standpoint;

and we must have the fairness, integrity and honesty to refer our patients, when necessary, to competent specialists. We must by every means keep abreast with the progress of our wonderful calling if medicine and medical men are to be accorded their proper places in the community.

Medical cooperation, like charity, begins "at home." It must begin there if the fruit of individual endeavor is to be worthy of consideration. Professional team-work must have its inception and foundation in the individual physician. Advancement in medical science has been so rapid, the difficulty of keeping pace with its progress is so great and the demands upon us so large, that if the physician is to accomplish adequate results—aside from merely earning a livelihood—it is necessary for him to be constantly on the alert. Carelessness in medicine is detrimental to individual initiative; it is destructive; it lowers efficiency; it minimizes the sum total of the accomplishments of the profession as a whole. So it is well for us, as medical men, individually and collectively, to take stock of our obligations and resources as a profession. We need to recall to our distracted minds the ancient and honorable lineage of our professional forefathers. From a study of their sacrificing, and so satisfying, lives and accomplishments, we may gain a new vision of the fundamental ideals of our profession. Thus may we gain a broader understanding and a larger spirit of consecration for the work that lies before us, waiting to be done. To do that work we must cooperate, but before there can be team-work among individuals, there must be a spirit of cooperation in each individual member of our profession. In other words, every man must be a unit. His unity of interest will determine the character of his work as a physician, it will measure his fitness as a member of the profession and his standing in the eyes of the community.

This is true; the individual physician stands as a unit, the representative of our body politic in his community. The individual physician is so held accountable by the laity today. Our pro-

\*Delivered before the Fifty-sixth Annual Meeting of the Florida Medical Association held at St. Augustine, April 2, 3, 1929.



fession is judged and measured by the rank and file of the average doctor in the community. The standard of service rendered by the physicians of each community will determine the estimation in which the profession is held, and the attitude of the people toward the doctors and their ideals. By every means available, we should try to grow and to develop to the highest our skill in the amelioration of human suffering.

In addition to our duty of adding to and increasing our own personal efficiency, we ought to be more active as a profession in furthering the interests of organized medicine, in public health measures, in school hygiene, in the sanitary problems of the community, in the proper conduct of our public institutions which have to do with the care of the sick, disabled and mentally deficient. The return of sick and crippled individuals to a life of usefulness is not only a financial saving but a moral duty of the State, and our knowledge in matters of health places on us a special responsibility.

Only too often in the past, high medical offices have been distributed as the pawn of party politicians. Such offices, however, are no legitimate part of the spoils system. They should not be the plaything of politics devoted to petty political expediency. It is time our State Medical Association stepped in and asserted itself. Public health matters should be delegated to those best fitted to serve the public welfare, not devoted to political ends and political expediency. I think all appointments to the Board of Medical Examiners should come through the recommendation of our State Medical Association.

Our State Medical Association should prove itself worthy of a voice in the selection of public medical officers. Then after their election, we need to give them our support and commendation for services rendered. To this end we should be less interested in politics, both within and without, and more interested in the policies of conduct, in principles of procedure, in high standards of public service. We need to choose as our representatives and State Officers men of standing, men of vision and ideals in service. We need to exercise every legitimate effort to secure for them greater freedom of action, larger powers for the promotion of public health and the health education of the people. Only by such active and open support can our State Association exercise influence which we ought to exercise in matters of public health. Only so can we win the

approval of the people; only so can we take the place which we ought to occupy on a plane with other State Medical Associations.

The physicians of Florida possess at least average intelligence; we have men of education and ability, of excellent training—men who are efficient in their profession, who are progressive, who compare favorably in their attainments, in medical acumen and surgical skill with the physicians of other states. It remains only for us to utilize to the full the possibilities for advancement inherent in our State Association. I take it that the purpose of medical organization is not the development of surpassing excellence in a few men and their exploitation, but the building up of the individual physician, the raising of the standards of service of the average man—thus to make the blessings of our healing available to all our people.

So, while the fellowship and the relaxation to be enjoyed at our Annual Meetings are desirable, their chief value lies in the fact that there we may meet on common ground for the exchange of views, for gathering information. Here we may learn from the experience of others better methods of work for our professional advancement. Our annual meetings with their clinics and scientific programs should be designed to give us real post-graduate work, with which, by the way, business meetings should not interfere too much.

In my humble judgment, we have come to the place when we ought to consider the establishment of a permanent home for our State Association and a library which ought to be made available to all the members throughout the State.

It is increasingly true that in our profession no man liveth unto himself. While our work is largely individualistic in the sense of intimate personal relations between patient and physician, our highest efficiency is attained only through cooperation and mutual understanding, and friendly relations among all physicians. The attitude of the public toward us, and the opinion held by the laity, depend largely on our attitude and opinion of each other as expressed to, or in the hearing of, the laity. We will not be held in respect and honor by the public unless we hold ourselves and our professional brethren in honor. Harsh criticism, fault-finding, back-biting have no legitimate place in the armamentarium of the ethical physician. They are beneath his dignity, they are detrimental to his work, they are de-



structive to his influence for good in the health education of the public.

Only too often have the indiscreet expression of opinions and professional criticisms been one of the factors, if not the foundation, of damage suits against physicians.

Let us strive individually and collectively to render to our patients and to the public the highest services of which we are capable. Whenever feasible, let us hold consultations with our colleagues—and in case of need, let us demand and obtain the service of specialists. The best of modern means and methods is none too good to fulfill the responsibilities with which we are burdened. Let us take the people into our confidence—we may, with profit to ourselves and benefit to them, tell them the facts. We have nothing to hide. On the contrary, the services which our profession has rendered and is rendering are honorable, praiseworthy, and of incalculable benefit to humanity and civilization.

But with all our wonderful achievements in the science of medicine, let us explain to patients and public that we are only human, and not omnipotent in our control over human frailties and the ravages of disease and accident; that we will sometimes fail in our ministration, because of factors which are beyond all human control. Disease and death will sometimes win, however wisely, bravely and efficiently we fight; but let our patients and the public feel that we have fought a good fight, that we have kept the faith, that we have fought together, that we have rendered our utmost service, that we are dissatisfied with even a partial victory, that we are prostrated by failure and the loss of the battle. Then, people will recognize the unselfishness and the vast service of our calling; will grant to us, the men of medicine and surgery, the meed of honor which is ours by right of achievement and might of influence.

Ours is a great calling of reconstruction and rehabilitation; we remedy defects, we bring health, and life, and happiness. We have miasmal swamps of death to flourish as a green bay tree with the fruits of civilization. In cellar and in garret, in lowly hovel and in lordly palace, to rich and to poor, to the humble and to the elect, our ministrations have been extended; the good Lord has granted us countless and ever-increasing victories over disease and premature death.

The pathological laboratory, with its many methods for the diagnosis of diseased conditions;

the X-ray, with its wonderful power to visualize the hidden portions of the body and to cure many otherwise incurable diseases; radium, that man-discovered, miracle-working element; surgery, with its marvelous ability to reconstruct and restore diseased and damaged organs and bodies; the various antitoxins, vaccines and serums—all these are available at your need. Their value is established beyond question of scientific proof.

And yet, we doctors mourn over the fact that every year in this enlightened and beloved land of ours more than 600,000 lives are sacrificed to preventable diseases—one every fifty seconds. Every year in this country 100,000 persons die of cancer. Every year 9,000 women die of cancer of the breast alone—one every hour. Why this awful, this terrible waste of life? you ask. Largely because we cannot persuade the people to accept and apply well-known and scientifically proven preventive methods. Largely because of the delay in seeking competent medical advice; because of the lack of early diagnosis and proper treatment. Such delay is often fostered by a false impression of fatality, of the futility of treatment; often because of a trust in false irrational and unscientific methods of treatment. Let it be said as earnestly as English words can say it—not pills and potions, not in the contents of countless bottles of patent medicine covered with lithographed and fraudulent promises to cure multitudes of ills, not in the mere laying on of ignorant hands, not in incantations nor the mere repetition of empty phrases or senseless formulæ, not in the stubborn denial of the fact of ill health and disease, and feigned blindness to the presence of its ravages; not in any of these or in all of these is the remedy for this tremendous toll of human life exacted by disease. Only in the early and intelligent application of scientific and proven means of cure in the hands of qualified men is there hope of saving these otherwise doomed lives.

These means of cure should not be feared, their employment should not be delayed. They should be welcomed as instruments of salvation in the hands of physicians qualified to use them. To the credit of our profession, be it said that efficient professional and hospital service can be obtained in practically every community of any size. It requires no prophet to foresee that intelligent support of the men and methods and institutions available will serve still further to multiply their numbers and to develop their efficiency

to an even greater extent. The failure is not in availability, but in the lack of accepting their services early.

The life and high standards of organized medicine should be protected. Your help and support are solicited in connection with the efforts of the Committee on Legislation to have enacted at the coming legislature, a basic science law.

The keystone of medical cooperation lies in the component county society. The coordination of the efforts of the component societies lies in the State Association. Make your county society a monument to organized medicine in your community.

As I relinquish the reins as your leader, I wish to recognize the faithful services and hearty cooperation of my associate officers, councilors and

committeemen. At the pre-convention meeting last February, sixteen councilor reports were presented. Most of the missing reports were received in time for publication in the March Journal. I wish to thank the councilors for their work with the component societies of their districts. The results obtained by constructive work of the members of the various committees are self-evident. Before you leave St. Augustine, the carefully laid plans of the entertaining society will have matured as convincing evidence of hard work and enthusiasm. The inspiration given me by Dr. Shaler Richardson, secretary-treasurer and editor of the Journal, together with Dr. Stewart Thompson, business manager, has all gone to make this one of the happiest years of my life.

## PROCEEDINGS

*of the*

### FIFTY-SIXTH ANNUAL MEETING

*of the*

### FLORIDA MEDICAL ASSOCIATION, Inc.

### HELD AT ST. AUGUSTINE, FLORIDA

APRIL 2nd and 3rd, 1929

The Fifty-sixth Annual Meeting of the Florida Medical Association was called to order at 10 a. m. in the Casino auditorium of the Alcazar Hotel at St. Augustine by Dr. J. M. Irwin, chairman of the Committee on Local Arrangements. The invocation was rendered by the Reverend Barton B. Bigler, D. D., pastor of the St. Augustine Memorial Presbyterian Church. The address of welcome on behalf of the St. Johns County Medical Society was made by Dr. W. D. Webb, president. The Honorable George W. Bassett, Jr., Mayor of St. Augustine, then welcomed the members of the Association on behalf of the City of St. Augustine. This welcome was responded to on behalf of the Association by Dr. J. Knox Simpson of Jacksonville. Dr. Frederick J. Waas of Jacksonville then delivered the annual presidential address, the subject of which was "Medical Cooperation."\* Dr. William D. Haggard of Nashville, Tennessee, having been invited as the guest of honor, delivered an ad-

dress on "Perfecting Methods in the Operation for the Bad Risk Goiter Patient" (with lantern slides demonstrations). This concluded the first General Session of the meeting.

#### SECOND GENERAL SESSION

The Second General Session convened in the Casino auditorium of the Alcazar Hotel at 12:15 p. m., April 2nd, and was called to order by the president, Dr. Frederick J. Waas of Jacksonville. Dr. Waas recognized Dr. C. D. Cleghorn of Miami, president of the Dade County Medical Society, who made the following announcement of the next meeting of the Southern Medical Association:

"Florida, after a lapse of fifteen or sixteen years, is to have the opportunity of entertaining the Southern Medical Association in this State. Jacksonville entertained the Southern Medical Association a number of years ago. At that time South Florida was quite a different place from what it is today. The Southern Medical Association is going to meet in Miami next November. It is not

\*President's Address will be found on page 485.

the work of Dade County alone to entertain the Southern Medical, it is the work of the entire State. We realize that we have a tremendous undertaking, a tremendous responsibility, and we have our entire Society at work. This work has been divided up almost entirely among various committees, and all committees are at work. We believe that the Southern Medical Association is not going to make any mistake in bringing a large membership down to Miami for the scientific sessions and for the other features which always go along with such conventions. But we realize that without the hearty cooperation of every man in the State of Florida, this convention will not be a success. We are going to keep you in touch with our plans through frequent bulletins and letters. We want you all to feel that we are looking to you to help us, and to make suggestions if you have any constructive criticisms to offer, and we will certainly be very glad to adopt the suggestions if they can be adopted in the program. We have promised the Southern Medical Association a substantial increase in the number of members of that organization from the State of Florida. We have pledged 100% membership in our County Society. I would like to urge all of you who are not now members of the Southern Medical Association to join before you leave this session. It can be done at the registration desk before you leave. I feel that every person here is going to give me his hearty cooperation in this undertaking."

Dr. L. M. Anderson of Lake City made a motion that the privileges of the floor be granted to Mr. C. M. Miles, Director of Physical Health Education, Department of Education, Tallahassee. Motion was seconded and carried and Mr. Miles spoke on "Physical Health Education" as follows:

"In the five minutes allotted to me I would like to tell you of the number of things that we are trying to do in the State Department of Education. We are trying to eliminate some of the dead weight in education. In the work of physical health education, our aim is to try to build the best type of citizenship out of the boys and girls in the schools today, and to develop in the school children of today habits, attitude, knowledge, skill and efficiency to the greatest degree. In the past we have taught reading, writing and arithmetic, but in the future we are going to teach

children. Our aim is to raise them to a higher level of living. We want the doctors to know that we no longer believe that 'an apple a day will keep the doctor away.' We don't want to keep the doctor away. We want to educate the children to have an annual examination by the family physician. Our plan is to use the 11,150 teachers in the State of Florida to make the work of the doctor real to the 370,000 children. The program may be divided into three offices—health service, health supervision, and health instruction. In the health service we see that there is an annual examination by the doctor and then follow it up and have all defects corrected by the family physician. Clinical treatment has been a great factor in this work, and we appreciate it. I will quote these figures: In 1926 and 1927 there were reported 370,000 children from 257 schools. 93,000 children were reported out of these 257 schools in the State. Of these only 60,000 were examined. 43,000 were found with defects. 54,000 were weighed and measured. In 1927-1928, 361,000 children, and of them 60,000 were examined. 44,000 found with defects, and only 18,000 of these corrected. This is why I feel that the teacher can make the work of the doctor easier, as a rule, by encouraging these children to have these examinations made.

"Under health supervision we plan to establish cafeterias in schools and teach the proper methods of eating. Some of the things that cause complications involve cases of eye-sight, and we are trying to relieve some of the strain.

"Under health instruction we are trying to give the right ideas for the right methods of sleep, eating, clothes, rest, and care of the body. It would be a tremendous thing if we could get everybody every year to have the examination made. We are urging that in our schools. We are trying to develop the attitude, trying to have these examinations made, and all defects corrected.

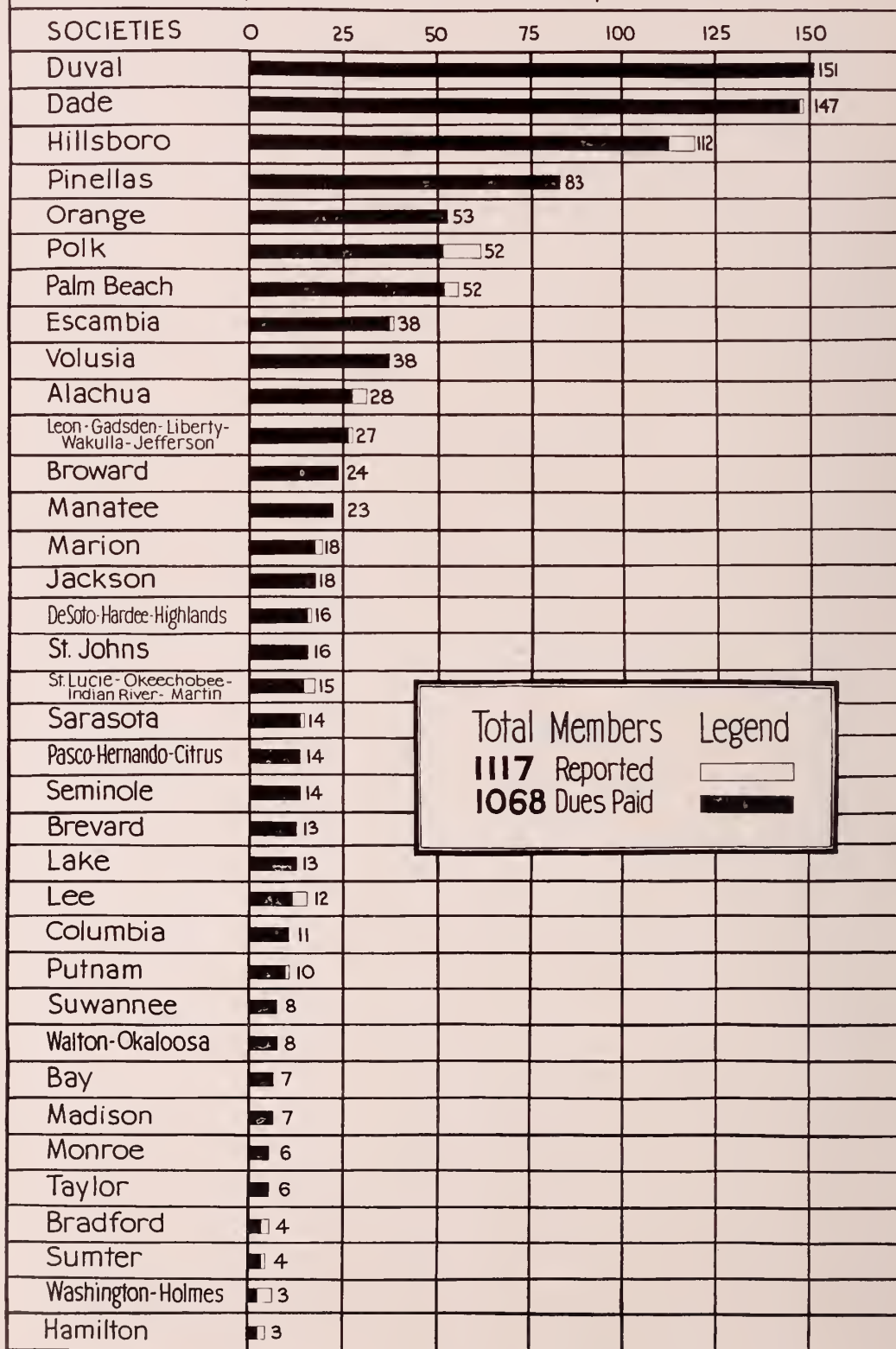
"In this connection I would like to call your attention to our blue ribbon program. Under this program we plan to give diplomas to all children who measure up to a certain standard of mental development, have the right kind of body, and live up to certain habits in school and home, as well as their immunity to certain diseases.

"I am glad to be here today, and I would like to ask your continued cooperation in this type of work."



# FLORIDA MEDICAL ASSOCIATION, INC.

Total Reported and Paid Members by Societies-1928



The following report was read by Dr. Shaler Richardson, Secretary-Treasurer-Editor:

REPORT OF  
SECRETARY-TREASURER-EDITOR OF  
THE JOURNAL, DR. SHALER  
RICHARDSON, AND BUSINESS  
MANAGER, DR. STEWART G.  
THOMPSON

*To the President and Members of the Florida  
Medical Association in Session at St. August-  
tine, Florida:*

Gentlemen:

MEMBERSHIP

Membership of our Association reached its peak in 1927 when 1,138 members were reported from the various component societies. This climax to the steady increase of membership from year to year resulted from intensive work in organized medicine throughout the entire state. Simultaneously with the united, systematic efforts to build up the membership, systematize the business office and arouse additional enthusiasm, what is known as a real estate boom, came and disappeared. Considerable apprehension arose in the minds of many of the members of our Association as to the status of organized medicine during the financial up-hill pull following in the wake of the prosperity boom. It is, therefore, with considerable gratification that we are able to announce that the 1928 membership stands at 1,117, with a total paid membership of 1,068.

While the total membership has been but slightly affected, a few individual component societies have shown considerable fluctuation. For two consecutive years, Dade County has held an undisputed lead in total paid memberships, with a total of 148 in 1926, rapidly rising to 170 in 1927. However, Duval County now steps into first place as the result of maintaining a slight yearly increase in paid memberships for three consecutive years, outdistancing Dade County in 1928 by the small margin of four paid memberships. For three consecutive years, Hillsboro County has held third place, notwithstanding the fact that a decrease took place from 117 in 1927 to 112 in 1928, making a total decrease of five. Pinellas County has held fourth place for three consecutive years, and here again we find a steady membership maintained with an increase each year. Polk County for two years held fifth place and Palm Beach County sixth place, but Orange County has now outdistanced both by one paid

membership, allowing the Orange County Society to step up into fifth place for 1928. Volusia County for two years ranked ahead of Escambia, but the 1928 paid membership records place Escambia County on even terms with Volusia. A number of other interesting changes have taken place, and your attention is invited to the bar chart showing graphically the position held by each county society. Those of you who are interested in the growth of membership in our Association will find it interesting to get down the back April Journals and compare the annual reports where we have tried to put on record complete data for review.

MEMBERSHIP AND FELLOWSHIP—AMERICAN  
MEDICAL ASSOCIATION

From inquiries received in our office, it appears that there is still a lack of understanding among some of our members relative to what is included with membership in our State Association. The membership of the American Medical Association is composed of those physicians who are members in good standing of county medical societies and state medical associations. It is not possible to hold membership in the American Medical Association unless membership is maintained in county and state organizations. Those members who are in good standing in their county society and state association automatically, without further financial outlay, become members of the American Medical Association. Members of our State Association are not required to pay dues to the American Medical Association except those who hold Fellowships.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION

In the reapportionment of delegates, Florida has for the first time been allowed two representatives due to the increase in membership. (At the last session of the American Medical Association, Florida was not represented in the House of Delegates. This was very unfortunate and should not occur again.) The selecting of delegates is a very important part of our duty in organized medicine. Every member in our State Association is not eligible. Therefore, great care should be taken to select representatives who may qualify according to the by-laws of the American Medical Association.

A letter was received from the American Medical Association recently, setting forth the essentials in connection with our selection of delegates, and I will quote as follows:

"It has happened several times that state med-

# FLORIDA MEDICAL ASSOCIATION, INC.

Total members who have paid state dues  
 ~ 1918 to 1928 inclusive. ~

Year	Total	Members					
		0	200	400	600	800	1000
1928	1068						
1927	1106						
1926	1018						
1925	645						
1924	536						
1923	482						
1922	271						
1921	545						
1920	524						
1919	396						
1918	409						

ical associations have elected as delegates members who have not been Fellows of the American Medical Association for the required two years immediately preceding the session of the House of Delegates at which they are to serve. Of course, the Committee on Credentials of the House of Delegates of the American Medical Association has been compelled to refuse to seat men so elected, because the provisions of the Constitution and By-Laws are very explicit and no alternative has been left to the Committee on Credentials. Your constituent association is entitled to two delegates. \* \* \* Please have the delegates instructed to present their cards to the Committee on Credentials at Portland before taking their seats in the House of Delegates. \* \* \* Under the rule of the House of Delegates of the American Medical Association, the Certificate of Election of Delegates of a constituent state association must be sent to the office of the secretary of the American Medical Association not later than seven days prior to the first day of the first meeting of the House of Delegates."

Section 8, Chapter IV of our By-Laws provides that the House of Delegates of the Florida Medical Association shall elect representatives to attend the American Medical Association meeting and that not more than one-half of the delegates shall be elected in any one year. It will, therefore, be necessary for the House of Delegates at this meeting to elect two representatives, one to serve a term of one year and the other to serve a term of two years.

## COUNTY SOCIETIES

The strength and high standing of the State Association lies in the effectiveness and enthusiasm of the different component societies. It is with considerable pleasure that we are permitted to report the unusual interest and enthusiasm existing in the county medical societies during the past year. Your officers have been invited to attend many different county medical society meetings, and the untiring efforts of our president in attending such meetings has been a contributing factor to the interest already existing locally. He has, during the past year, been a guest of eleven



societies, as follows: Columbia, Dade, Duval, Hillsboro, Lake, Leon-Gadsden-Liberty-Wakulla-Jefferson, Marion, Orange, Polk, St. Johns and Sarasota. Your secretary officially visited eight component societies, and it was only pressing matters at home that prevented the acceptance of other invitations. The societies visited were: Columbia, Broward, Duval, Leon-Gadsden-Liberty-Wakulla-Jefferson, Marion, Orange, Putnam and St. Johns.

One new component society was created during the past year, which is to be known as the Washington-Holmes County Medical Society. Formal application has been filed, membership dues paid and the House of Delegates will be requested to issue a charter to the new society.

## FINANCES

Following the usual procedure since the establishment of a business office, your Executive Committee approved the proposed budget which was submitted to carry on the work of the Association for the past year. The total expenditures were kept well within the provisions made in the budget. No unusual indebtedness has been incurred and the finances of our Association have been carefully conserved. The audited report of our books, up to and including March 20, 1929, shows a balance of \$16,239.61. The following financial statement, together with report of Ford, Fisher, Boyd & Colley, Certified Public Accountants, is submitted for your approval:

## FORD, FISHER, BOYD &amp; COLLEY

Jacksonville, Florida

March 29, 1929

DR. SHALER A. RICHARDSON,  
Treasurer, Florida State Medical Association,  
Jacksonville, Florida.

DEAR SIR:—This is to certify that we have examined the attached statements of Cash Receipts and Cash Disbursements for the period from March 24, 1928, through March 20, 1929. These statements have been prepared by Dr. S. G. Thompson, business manager of the Florida Medical Association, and the Florida Medical Journal, and correctly reflect the total amounts received and disbursed as shown by the books.

In accordance with your instructions, we have checked the total of the collections shown by the statements with the corresponding total shown by the books, and found them to be in agreement.

Cancelled checks were examined and compared with the entries in the Cash Disbursement Book; Cash Book was added and all postings checked to the General Ledger; and the General Ledger was added and a Trial Balance taken off as of March 20, 1929.

Bank Accounts were reconciled with the bank statements.

Yours faithfully,

FORD, FISHER, BOYD &amp; COLLEY.

By F. B. Colley, C. P. A.

## CONSOLIDATED CASH STATEMENT

March 24, 1928, through March 20, 1929

<i>Receipts</i>	
Cash in Bank, March 23, 1928 .....	\$12,874.77
Dues Collected (Exhibit "D") ....	\$9,590.00
Earnings from Advertising (Exhibit "E") .....	3,972.00
Subscriptions and Miscellaneous	
Sale of Journal .....	20.45
Bonus from Cooperative Medical Advertising Bureau .....	224.93
Interest on Savings Accounts ....	328.05
Earnings—Technical Exhibits (Exhibit "C") .....	900.00— 15,035.43
Total Cash to be Accounted for .....	\$27,910.20
<i>Disbursements</i>	
General Fund, Expenses (Exhibit "A") .....	\$3,488.20
General Fund, Refund of	
Dues (1928-1929) ....	130.00—\$3,618.20
Journal Expense (Exhibit "B") ....	7,256.06
Technical Exhibit Expense (Exhibit "C") .....	193.08
To Entertaining Society .....	540.00— 733.08
Furniture & Fixtures .....	37.75
Library .....	25.50—\$11,670.59

Balance in Bank, March 20, 1929 .....

\$16,239.61

## EXHIBIT "A"

## CASH STATEMENT—GENERAL FUND

March 24, 1928, through March 20, 1929

<i>Receipts</i>	
Cash as per last audit .....	\$15,579.34
Back Dues Collected (Exhibit "D") .....	\$2,560.00
Current Dues Collected (Exhibit "D") .....	7,030.00— 9,590.00
Interest on Savings .....	328.05
Total Cash to be Accounted for .....	\$25,497.39

*Disbursements*

Salaries .....	\$1,866.10
Secretary-Treasurer	
Salary .....	600.00
Postage .....	85.36
Supplies .....	27.77
Telephone and	
Telegraph .....	73.97
Convention Expense ...	332.46
Traveling Expense ...	17.10
Auditing Expense ....	13.00
Legal Fees .....	400.00
Bond of Treasurer ....	43.75
Incidental Expense ....	28.69—\$3,488.20
1928 Dues Refunded ...	30.00
1929 Dues Refunded ...	100.00— 130.00
Furniture and Fixtures .....	37.75
Library (Binding of Journals) ...	25.50
To Journal Fund (\$3.00 per member paid, 1928 and 1929 collections) .....	2,838.00—\$ 6,519.45

Cash Balance .....

\$18,977.94

## EXHIBIT "B"

## CASH STATEMENT—JOURNAL FUND

March 24, 1928, through March 20, 1929

<i>Receipts</i>	
As per last Audit (overdraft) .....	\$ 2,704.57
Earnings from Advertising (Exhibit "E") .....	\$3,972.00
Subscriptions and Miscellaneous	
Sale of Journal .....	20.45
Bonus from Cooperative Medical Advertising Bureau .....	224.93
From General Fund .....	2,838.00— 7,055.38

Total Cash to be Accounted for .....

\$ 4,350.81

*Disbursements*

Salaries .....	\$1,976.53
Editor's Salary .....	600.00
Postage .....	129.42
Printing of Journal .....	4,156.60
Supplies .....	84.83
Telephone and Telegraph .....	14.21
Electrotypes .....	26.45
Auditing Expense .....	13.00
Convention Expense .....	171.46
Bond of Treasurer .....	43.75
Incidental Expense .....	39.81—\$ 7,256.06

Balance—Overdraft .....	—\$ 2,905.25
Plus Balance General Fund .....	18,977.94
Plus Balance Exhibit Fund .....	166.92

Net Cash Balance in Bank ..... \$16,239.61

**EXHIBIT "C"****CASH STATEMENT—EXHIBIT FUND**

March 24, 1928, through March 20, 1929

*Receipts*

Earnings from Technical Exhibits .....\$ 900.00

*Disbursements*

Salaries .....	\$21.50
Postage .....	4.54
Telephone and Telegraph .....	6.84
Traveling Expense .....	23.45
Skeleton Spaces .....	70.00
Drawing, Printing, Sign	
Painting, etc. ....	66.75—\$193.08
To Entertaining Society .....	540.00—\$733.08

Cash Balance ..... \$166.92

**EXHIBIT "E"****EARNINGS FROM ADVERTISING**

March 24, 1928, through March 20, 1929.

April, 1928 .....	\$ 520.07
May .....	203.31
June .....	485.17
July .....	217.60
August .....	372.20
September .....	195.06
October .....	380.16
November .....	252.39
December .....	336.56
January, 1929 .....	258.60
February .....	431.87
March .....	319.01

\$3,972.00

**ASSETS AND LIABILITIES**

March 20, 1929

*Assets*

Cash in Bank .....	\$ 792.21
General Fund—Accounts Receivable .....	3,450.00
Furniture and Fixtures (less depreciation) .....	97.82
Library .....	73.50
Stationery Inventory .....	25.94
Savings—Atlantic National Bank .....	5,251.42
Savings—Florida National Bank .....	5,195.98
Savings—Barnett National Bank .....	5,000.00

*Liabilities*

Capital Account .....	\$19,886.87
Journal—Accounts Receivable .....	29.33

\$19,886.87

**EXHIBIT "D"****DUES COLLECTED MARCH 24, 1928, THROUGH MARCH 20, 1929**

Name of Society	Total Members	No. Paid Members	No. in Arrears	1929 Dues Collected	1929 Refunds	1928 Dues Collected	1928 Refunds
Alachua .....	34	30	4	\$ 300.00	\$ 10.00	\$ 40.00	\$ .....
Bay .....	8	4	4	30.00	.....	.....	.....
Bradford .....	0	0	0	.....	.....	10.00	.....
Brevard .....	12	8	4	70.00	.....	30.00	.....
Broward .....	22	8	14	70.00	.....	70.00	.....
Columbia .....	11	11	0	100.00	.....	.....	.....
Dade .....	151	65	88	610.00	.....	700.00	10.00
DeSoto-Hardee-Highlands .....	15	14	1	140.00	10.00	30.00	.....
Duval .....	148	126	22	1,280.00	30.00	70.00	.....
Escambia .....	35	24	11	230.00	.....	170.00	.....
Hamilton .....	3	3	0	30.00	.....	30.00	.....
Hillsboro .....	112	44	68	430.00	.....	310.00	20.00
Individuals .....	2	0	2	.....	.....	.....	.....
Jackson .....	16	0	16	.....	.....	—10.00*	.....
Lake .....	13	9	4	80.00	.....	20.00	.....
Lee .....	10	7	3	60.00	.....	90.00	.....
Leon-Gadsden-Liberty-Wakul- la-Jefferson .....	35	25	10	240.00	.....	.....	.....
Madison .....	7	7	0	60.00	.....	20.00	.....
Manatee .....	19	15	4	140.00	.....	60.00	.....
Marion .....	20	16	4	150.00	.....	50.00	.....
Monroe .....	6	6	0	60.00	10.00	.....	.....
Orange .....	53	39	14	380.00	.....	290.00	.....
Palm Beach .....	49	39	10	380.00	.....	150.00†	.....
Pasco-Hernando-Citrus .....	14	11	3	100.00	.....	.....	.....
Pinellas .....	80	77	3	760.00	.....	10.00	.....
Polk .....	56	38	18	370.00	.....	250.00	.....
Putnam .....	12	8	4	70.00	.....	.....	.....
St. Johns .....	15	15	0	140.00	.....	.....	.....
St. Lucie-Okeechobee-Indian River-Martin .....	14	9	5	80.00	.....	40.00	.....
Sarasota .....	13	10	3	90.00	.....	10.00	.....
Seminole .....	12	10	2	90.00	.....	10.00	.....
Sumter .....	5	3	2	30.00	.....	10.00	.....
Suwannee .....	7	6	1	60.00	10.00	10.00	.....
Taylor .....	8	8	0	70.00	.....	.....	.....
Volusia .....	39	24	15	260.00	20.00	60.00	.....
Walton-Okaloosa .....	7	7	0	70.00	10.00	.....	.....
Washington-Holmes .....	6	0	6	.....	.....	30.00	.....
Totals .....	1,069	724	345	\$7,030.00	\$100.00	\$2,560.00	\$30.00

2,560.00—Back Dues Collected.

\$9,590.00—Total Dues Collected.

\*Transferred to Washington-Holmes.

†\$10.00 for 1927.

## ADVERTISING

The total earnings from advertising were \$4,196.93 as compared with \$4,719.53 for the previous year. Under the circumstances existing because of depressed conditions all over the country, we feel that this total of more than \$4,000.00 collected on advertising is quite creditable. The income from advertising is very important in the existence of our state association and we are appealing to you as members again this year for help in soliciting desirable advertisements for the pages of your Journal. Many of you, as members, could help us close contracts with firms operating in your city. A few moments of your time would undoubtedly give our office a contact which would result in an advertising customer who would be glad to use this source of disseminating information and at the same time reimburse the treasury of the State Association.

## JOURNAL

Your Journal reflects the standing and standards of organized medicine by you as individuals and as members of your county and state societies. As your servants, we are trying to do our very best to publish a high-class state medical Journal which will reflect credit on any individual who is connected with organized medicine in this state. A personal letter is written each month to Associate Editors soliciting instructive and timely editorials. All secretaries and officers of component and state societies are canvassed each month through a post-card system in an effort to secure state-wide news that will be of interest to the members. Practically every newspaper in the state is checked for news items in order that your state news column may contain information that will keep the members interested and posted concerning the activities of their associates.

Original articles should form the most important part of your Journal. There has not, for several years, been a real shortage in your contribution of original articles for publication. Let me call your attention to the opportunity of putting on record valuable information to your colleagues through the pages of the Journal and urge all members in presenting papers before component societies to prepare the manuscript in such a way that it may be turned over to the secretary for transmission to the Journal. Carefully written articles, illustrated by cuts when possible, are read by more than a thousand interested doctors and is a means of elevating our standards and arousing interest and enthusiasm in the profession we have chosen for our life's

work. Let me lay it upon your hearts—put on paper the gleanings of your study and work as far as possible and present it for publication. This important part of the activities of this Association should not be left to the members of a few county societies, but, on the other hand, every member of the State Association should participate in this most important and constructive part of the program of organized medicine. In order that you may have available in concrete form information as to the societies that have contributed and had published original articles, the following tabulation for a three-year period is submitted:

ORIGINAL ARTICLES PUBLISHED BY SOCIETIES  
1926-1928, INCLUSIVE.

SOCIETY	1926	1927	1928	TOTAL
Duval .....	31	12	8	51
Dade .....	8	18	22	48
Hillsboro .....	6	5	15	26
Palm Beach .....	2	3	9	14
Orange .....	3	4	4	11
Escambia .....	4	4	1	9
Leon-Gadsden-Liberty-Wakul-				
la-Jefferson .....	1	1	6	8
Pinellas .....	1	4	3	8
Broward .....	0	1	5	6
Columbia .....	0	1	4	5
Jackson .....	0	1	3	4
Polk .....	0	1	3	4
Manatee .....	0	0	3	3
Monroe .....	3	0	0	3
Sarasota .....	1	1	1	3
Alachua .....	2	0	0	2
DeSoto-Hardee-Highlands ....	0	1	1	2
Lee .....	0	0	2	2
St. Johns .....	0	1	1	2
Brevard .....	0	0	1	1
Madison .....	0	1	0	1
Marion .....	0	0	1	1
Miscellaneous .....	3	1	1	5
Totals .....	65	60	94	219

The following societies have not been represented since 1925: Bay, Bradford, Hamilton, Lake, Pasco-Hernando-Citrus, Putnam, St. Lucie-Okeechobee-Indian River-Martin, Seminole, Sumter, Suwannee, Taylor, Volusia, Walton and Washington-Holmes. Your Journal has been published regularly every month during the past year, although many unusual and disturbing elements have often interrupted the regular schedule. By extra effort and long hours, the mailing date of the 20th has always found your Journal in the hands of Uncle Sam ready for distribution.

## TECHNICAL EXHIBITS

The handling of technical exhibits at our annual meetings has been quite a problem, as it has been impossible to arrange these exhibits in a uniform manner through the local societies, owing to the fact that no uniform regulations had been approved. Each entertaining society,



in the past, took over the responsibility for just a single meeting. This practice put the local society at quite a disadvantage, as there was no opportunity to profit by previous experience. Therefore, in many cases, the same mistakes were made from year to year. No records of the exhibits or exhibitors have been available through the State Association. In some instances, undesirable exhibitors have wedged their way into the exhibit hall. Many requests were received urging the business office to take over technical exhibits at the annual meetings and that every exhibitor be approved by the American Medical Association or the officers of the State Association.

With the approval of the Executive Committee as well as the entertaining society, the responsibility for the sale of exhibit space was taken over by our office. Correspondence has been exchanged with practically every state medical association in the country. Your business manager, while in Chicago on other business, made a personal visit to the American Medical Association headquarters and spent considerable time with the man in charge of exhibits of the national organization. He also met personally the business manager of the Iowa State Medical Association, who has charge of exhibits in that state. After months of careful preliminary work, floor plans of the Alcazar Casino were reproduced and an application form prepared outlining the exhibit space for sale, together with rules and regulations under which exhibitors might operate. This application form was reproduced in the March Journal. Preparation was made to take care of twenty exhibitors. One large space, 20'x 60', together with the alcove, has been set aside for scientific exhibits for which no charge is made. On March 20th, when our books were closed for the official audit, all exhibit spaces had been sold except one. Every exhibitor, without exception, has paid for his space, so that there has been deposited a total of \$900.00, direct income from the sale of exhibit space.

It is understood that the major part of the net income from the sale of exhibit space shall be used by the entertaining society to defray necessary expenses in connection with the annual meeting of our Association. There is considerable necessary expense in connection with the staging of an exhibit such as you see in the exhibit hall of the Casino. This has been paid out of the percentage retained by the State Association.

After due consideration, your Executive Committee gave us the following ruling:

"After careful consideration, the Executive Committee has officially approved a donation of sixty per cent (60%) of the gross receipts derived from the sale of exhibit spaces at the annual meeting of the Florida Medical Association to the component society acting as host, this donation to be used by said component society in connection with the entertainment of the State Association.

"On the present basis, it is estimated that forty per cent (40%) of the gross income from exhibits will be necessary to defray expenses in connection with the sale of spaces, i.e., postage, printing of application forms, drawings, lumber, labor, stenographic help, sign printer's markers, etc.

"It is understood and directed that any balance remaining after payment of bills in connection with the entertainment shall be returned promptly by said component society to the treasurer of the State Association."

Following these instructions, 60%, or a total of \$540.00, was turned over to the treasurer of the St. Johns County Medical Society on March 20, 1929.

#### RECAPITULATION

Every member of this Association may feel justly proud of the accomplishments and attainments achieved during the last few years. Activity, enthusiasm, financial strength, together with prestige in our communities, state and nation, have been accomplished through the united efforts of those interested in organized medicine. Many questions arising from time to time in the minds of individual members have been easily answered while other questions seem more perplexing. When our Association was without funds, the question as to the necessity for resources was not taken seriously. However, as we grow in membership and finances, the question seems to arise as to the necessity for increased resources. One answer which presents itself is best stated by asking a question. "Why do you want a bank account in your own name?" Your state organization, if it is to be recognized as having power, prestige and strength, must needs have money to back it up. Therefore, every reason which fires your ambition to increase your family budget should fire your ambition to increase the resources of the state organization which represents the profession of your choice.

This is a day and age of pictures and short sentences. In closing this report, we would like to leave with you a few concise statements indicating progress and accomplishments during the past few years.

- (1) Year 1922, 271 paid members.
- (2) Year 1924, 536 paid members.
- (3) Year 1926, 1018 paid members.
- (4) Year 1928, 1041 paid members.
- (5) Year ending 1926, advertising receipts, \$2,500.00.
- (6) Year ending 1927, advertising receipts, \$3,000.00.
- (7) Year ending 1928, advertising receipts, \$4,700.00.
- (8) Year 1929, State Association directs exhibits.
- (9) 19 spaces sold.
- (10) Exhibit income, \$940.00.
- (11) Year 1926, \$3,695.00 debt wiped out.
- (12) Year 1927, \$5,000.00 saved above expenses.
- (13) Year 1928, \$10,000.00 reserve at interest.
- (14) Why have a reserve?
- (15) Are resources necessary for F. M. A.?
- (16) Money means power—might.
- (17) Organized medicine needs power.
- (18) Why increase your personal resources?
- (19) Same reason for F. M. A. reserve.

Dr. Thompson and I wish to thank the members of the Florida Medical Association for their wholehearted cooperation in carrying on the work of our office, for it has been by this means alone that our organization and its Journal have continued to flourish for another year.

Respectfully submitted,

SHALER RICHARDSON,  
*Secretary, Treasurer and  
Editor of the Journal.*

STEWART G. THOMPSON,  
*Business Manager.*

Motion made, seconded and carried to accept this report.

Motion made to thank Dr. Richardson and Dr. Thompson for this excellent report and that they be complimented. Motion seconded and carried. Rising vote of thanks accorded Dr. Richardson and Dr. Thompson.

The report of the Executive Committee was then presented by Dr. L. M. Anderson, chairman, Lake City.

## REPORT OF EXECUTIVE COMMITTEE Gentlemen:

The Executive Committee this year has quite a brief report. The affairs of the Association during the interim have been so well systematized and regulated that it is necessary to call on this committee only for extraordinary decisions of policy, etc. Owing to the expense of calling together the members of the Executive Committee, the few official decisions that were required have been secured through the mail.

A budget was submitted providing for the work of the Association for the ensuing year. This budget was approved after careful consideration by each member.

On April 30th, 1928, a check was signed in favor of A. T. Stuart in payment of all professional services rendered to, or expenses advanced on behalf of the Florida Medical Association, Inc., at any time prior to the date of this invoice, to-wit: April 30, 1928. This was an adjustment in connection with the Association's proportion of expenses incurred pertaining to the preparation of a bill providing for the annual registration of those practicing the healing arts.

The plans worked out by your president, secretary-treasurer and business manager in connection with taking over the general supervision of all technical exhibits for the Association at all annual meetings has been approved. Money derived from the sale of technical exhibit spaces is to be divided as follows: an amount up to 60% to the entertaining society, if needed to defray expenses in connection with the entertainment of the State Association; 40%, together with any balance that is returned by the entertaining society, to be used by the state treasurer for necessary expenses.

At the request of the Committee on Arrangements, the date of this, the Fifty-Sixth Annual Convention, was approved as April 2nd and 3rd, 1929.

After considerable discussion, your Committee approved holding the annual banquet on the last evening of the meeting in place of the previous evening. This action met with the approval of the local society's Committee on Arrangements and seems to work out very nicely with their plans.

Respectfully submitted,

L. M. ANDERSON,  
*Chairman;*  
G. RAAP,  
JOHN S. HELMS.

Motion was made to adopt this report, which was seconded and carried.

The report of the Committee on Legislation and Public Policy was presented by Dr. William Rowlett, Chairman, Tampa:

#### REPORT OF COMMITTEE ON LEGISLATION AND PUBLIC POLICY

Your committee begs to report that it has had a year of activity. Its major achievement has been that of drawing up the proposed Basic Science Act and endeavoring to create a sentiment in behalf of it among the physicians, laymen and legislators. There have been several joint meetings with members of your committee, various county societies and members of the legislature. All of these were well attended and a most harmonious and cooperative spirit prevailed. We trust that the Association will lend its untiring efforts in aiding us to carry on our efforts to have this much-needed law enacted, which will be a vast aid in the efforts of the medical profession to protect the public from incompetency in the treatment of human ills.

For the benefit of those who are not so well posted on the proposed Basic Science Act, we will reiterate that it is for the purpose of creating a board for testing the qualifications of the candidates for any method of the healing art and their knowledge of the fundamentals of sciences (Basic Sciences), before they are permitted to go before their individual professional board. In order to eliminate any possible prejudice, it is proposed that the board be made up of college men other than physicians. Basic Science Boards are now operating successfully in five states, namely, Connecticut, Minnesota, Nebraska, Washington and Wisconsin. The laws in these states are very similar, defining the Basic Sciences to mean and include anatomy, physiology, pathology, bacteriology, chemistry, hygiene and diagnosis. The creation of such a board, in addition to being in line with the time-honored custom of the medical profession in continually striving to improve the health and living conditions of man, would likewise be a great assistance, just at this time, to our various chambers of commerce of the state, "That Florida offers to her tourists and the world at large nothing but the best."

Your Committee also begs to report that it has received from certain sources information that one of the schools of the so-called "drugless healers" will at the present legislature endeavor to

have their act amended so as to give them practically the same privileges as the regular medical profession. Such amendments have already been introduced in the legislature of several other states. Your committee, working with the Board of Medical Examiners, for years were successful in blocking what we considered undesirable legislation of the drugless healers. In 1927, acting upon instructions, after the joint meeting of the representatives from the various county societies' committeemen and officers of the State Association, who believed an amicable compromise had been reached, our activity was slackened. We now feel that this was an error, that the confidence of the Association has been taken advantage of by certain politicians. Therefore, we recommend that the State Association keep a representative in Tallahassee during the entire session of the legislature.

We are glad to report that the annual registration act passed by the last legislature and placed under the jurisdiction of the State Board of Health, is working out successfully and has been the means whereby much valuable information is gained by the Board of Health as well as the State Board of Medical Examiners. We would like to take advantage of this opportunity to commend the Board of Health, and especially Dr. Stewart G. Thompson, for the very efficient manner in which they have handled the annual registration and the splendid cooperation with this committee in securing certain valuable data.

Your committee recommends to the Association for its consideration the question of the reorganization of our present coroner system in the state. We feel that the present system is a very faulty one. The present law should either be amended or a new law enacted whereby the coroners would be physicians, and appointed by the Governor upon the recommendation of the county commissioners instead of being elected. If this change is not found feasible, we recommend the creation of a "medical examiner" system, such as is in force in Massachusetts and New York City. Such changes would insure a better performance of the medico-legal work of the state by men equipped for it, and the saving of thousands of dollars and much valuable time.

From the standpoint of Public Policy, your committee finds there is a growing sentiment in the profession for a more active participation in politics and public affairs, especially in those matters pertaining to health and medical legislation.



At the last legislature, while hundreds of thousands of dollars were spent in the creation of useless new Judgeships, and other numerous unnecessary offices, our health program and institutions were pitifully trimmed. Your Chairman has visited most of the state health institutions and finds them as efficiently conducted as possible under their limited financial means. We recommend that the State Association and its members lend its influence for the establishment of better housing conditions for the State's unfortunate insane.

We suggest a closer alliance with the dental societies and believe that every county medical society should devote at least one meeting a year to a joint meeting with the Dental Society. We also feel that if the State Association is to achieve its greatest possibilities, we must make greater efforts to support the small county societies, the country and general practitioners. The larger societies and the specialists of the cities who have had a greater opportunity to keep abreast, possess an excellent opportunity to aid their less fortunate brethren and should lend their best efforts when called upon to aid in furnishing them with program material. However, barnstorming, where occasionally a specialist seeks these opportunities to present papers for commercial gain, should be strictly discouraged.

We regrettingly acknowledge that we find a steady trend in the direction of state medicine and the practice of medicine by lay corporations. In fact, the physicians themselves, we find, are becoming more and more interested in specialization and salaried positions. The great changes that have taken place in the commercial world, chain stores and banks, installing, buying, etc., caused by the economic conditions of the day, are also being reflected in the medical world. The business men are learning that money invested in order to maintain good health among their employees returns big dividends. They have also come to the conclusion that hospital and medical cost is too high for the average working man, and have turned to creating their own medical and hospital organizations. While this is not altogether the fault of physicians or the hospitals, but the result of economic conditions, it is deserving of our consideration. There are so many organizations in the state that are dealing with health matters that space and time will not permit us at this time to deal with them. Generally speaking, however, we have with us today, the

Federal Government Boards, the State, County and City Health Boards, each with their health centers and programs for free clinics, and each the Federal, State, County and City with their politically controlled hospitals. Then with a dawn of new enthusiasm comes the industrial corporations, insurance companies with their nurses and doctors, the benefit societies and hospitals with their contract physicians, the health and cancer control societies headed by laymen. The prevention of certain diseases, as diphtheria, small-pox, measles, scarlet and typhoid fever, whooping cough, etc., which have been taken over by public health and corporation physicians, we find, have a telling effect upon the general practitioner and private practice, roughly estimating a 20% reduction in the field of his practice, which will in time eliminate him if the general trend to place such matters, pertaining to health, in the hands of the laymen continues.

We believe it is best that we be wise to the situations and prepare to meet them. Thus we recommend that a committee, to be known as the "Industrial Medical Survey Committee of the Florida Medical Association," be created.

Respectfully submitted,

W. M. ROWLETT, M.D., *Chairman*, Tampa;

C. D. CHRIST, M.D., Orlando,

F. C. MOOR, M.D., Tallahassee.

Motion was made to adopt this report, which was seconded and carried.

The report of the Committee on Hospitals and Medical Education was presented by Dr. John E. Boyd, Chairman, Jacksonville, as follows:

#### REPORT OF THE COMMITTEE ON HOSPITAL AND MEDICAL EDUCATION

A careful survey by the Florida Hospital Association disclosed a total of seventy-eight hospitals operating in the State January 1, 1928. During 1928 four more have been opened.

Of these eighty-two hospitals, fourteen are municipally owned; nineteen by a corporation; twenty-six are private; four state-owned; four government-owned and fifteen not listed.

Fourteen hospitals in the State, or only 17 per cent, are at present on the Standardized List of the American College of Surgeons, and one of these is conditionally approved. In 1927 twelve were on this list, which means that only two have since complied with the College's minimum requirements. Twenty-two are listed to

have a capacity of less than 25 beds and are, therefore, unable to apply for standardization. Sixteen do not show the bed capacity at all. There remain thirty hospitals in the State that are either (1) accepting patients to whom they are unprepared to render approved service or (2) whose management is indifferent to the great privileges of standardization. Seventeen hospitals in the State have a capacity of 100 or more beds. Five of this number cannot qualify for a place on the "*Approved List for Internes*" of the American Medical Association because of their restricted service, e.g.: The Florida State Hospital; the Florida Farm Colony for Epileptic and Feeble-Minded; U. S. Veterans Hospital; Florida Sanatorium and Benevolent Association and the U. S. Naval Hospital. Of the remaining 12—four are on the Approved List and one more has applied. There still remain seven hospitals of this class who have not even made application for this favor.

The hospitals opened to the public in the past year are all modern in their construction and equipment. They are a credit to the communities in which they are located, and of outstanding value to the State at large.

The Committee wrote a letter to each hospital having a capacity of 25 or more beds, not already on the Approved List of the American College of Surgeons, asking what steps, if any, had been taken towards having their hospital so standardized; also enquired if they were ready and desired a visit from the College's representative. Nineteen letters were sent out and we had a reply from twelve. As a result of this the College was furnished a list of those now ready for inspection and asked to send their visitor at an early date. The hospitals are:

1. Alachua County Hospital, Gainesville.
2. DeLand Memorial Hospital, DeLand.
3. Halifax District Hospital, Daytona Beach.
4. Monroe Memorial Hospital, Ocala.
5. Mound Park Hospital, St. Petersburg.
6. Orange General Hospital (now conditionally approved), Orlando.
7. Victoria Hospital, Miami.
8. U. S. Naval Hospital, Pensacola.
9. Melbourne Hospital, Melbourne.

A letter was sent to every hospital in the State having a capacity of 75 or more beds and not already appearing on the "*Approved List for Internes*" of the American Medical Association. They were requested to state whether their hos-

pital had a resident or a non-resident staff. Each one was urged to consider the advantages to the hospital of complying with the standard required by the Council on Medical Education and Hospitals of the American Medical Association; the letter also set forth the benefits to their city and the state of having their future doctors supplied from carefully selected young graduates who had previously served a year's internship in a hospital with standard rating. Medical Education, necessitated by having Internes, was emphasized in its relations to the upbuilding of the hospital, the added knowledge acquired by the staff men giving the instruction as well as the young men receiving it. Ten of these letters were sent out and we had a reply from nine. This is an excellent showing.

During our term of office the following hospitals have been inspected for the Council on Medical Education and Hospitals of the American Medical Association relative to their fitness for a place on the "*Approved List for Internes*":

1. Jackson Memorial Hospital, Miami.
2. St. Vincent's Hospital, Jacksonville.

By invitation of the Controlling Board or other authorized agent we have officially inspected:

1. Polk County Hospital, Bartow.
2. Halifax District Hospital, Daytona Beach.
3. Alachua County Hospital, Gainesville.
4. Victoria Hospital, Miami.
5. Mound Park Hospital, St. Petersburg.
6. DeLand Memorial Hospital, DeLand.

Unofficially we have visited and carefully gone through:

1. Tampa Municipal Hospital, Tampa.
2. Monroe Memorial Hospital, Ocala.

As a result of the Committee's activities, several hospitals not qualified at this time for approval by either the College or the American Medical Association have become deeply interested and been stimulated to raise their standard.

Only in rare instances has indifference been exhibited. As a rule our advances have been welcomed and our help solicited. The results are not only gratifying but should call for a thorough follow-up.

In closing this report your Committee desires to present for your earnest consideration the facts and recommendations set forth below:

1. That the appointment of this Committee is, at present, a perfunctory affair and conveys only an empty honor. We have failed to find any mention of it in the By-Laws of the Association

and therefore there is nothing to be guided by relative to its duties or authority. The hospitals in the State were apparently not aware of its existence, or of any benefits to be derived therefrom.

2. That the Florida State Medical Association should set forth some standard, based on minimum requirements, for a list of "*Approved Hospitals*" to be published annually in its Official Journal; also in the Annual Report of the Florida Hospital Association. This Committee should be authorized and required to designate the hospitals deserving mention on such an approved list.

3. That each hospital, before enjoying the privileges of a place on this list, should be required to furnish evidence of its qualifications or, if deemed necessary, submit to an inspection by the Committee or some member thereof.

4. That the members of this Committee be appointed to serve as follows: One for a period of three years, one for two years and one for one year, the vacancy created each year being filled by appointment to a three-year service.

5. That this Committee preserve, at all times, a close liason with the Council on Medical Education and Hospitals of the American Medical Association, also the Florida Hospital Association.

6. The Committee feels that the time has arrived when post-graduate medical instruction could be successfully carried out in some of our larger cities having a variety of indigent clinical material and a standardized hospital to handle it. It is urged that serious consideration be given this by our larger towns.

All of which is respectfully submitted for your consideration and action.

JOHN E. BOYD, Chairman.

LEROY A. WYLIE,

R. O. LYELL.

Committee.

A motion was made, seconded and carried to accept this report.

Dr. H. C. Dozier of Ocala made a motion that the Second General Session recommend to the House of Delegates that the Hospital and Medical Education Committee be made a permanent committee of the Florida Medical Association, according to the recommendations contained in the report read by the Chairman, Dr. Boyd.

Motion seconded and carried.

There being no further business, the meeting adjourned.

# SCIENTIFIC ASSEMBLY

At 2 p. m., April 2nd, the Scientific Assembly convened and the following papers were read and discussed:

"The Advantages of Roentgenographic Diagnosis During the Progress of Labor," Joseph Halton, Sarasota.

"Fractures of the Skull. Importance of Early Diagnosis as to Treatment, Operative and Expectant," J. Ralston Wells, Daytona Beach.

"Intrauterine Injection of Lipiodol as a Diagnostic Aid in Gynecology," W. M. Rowlett, Tampa.

"Chronic Endocervicitis," H. A. Day, Orlando.

"Diabetes Insipidus," Herbert L. Bryans, Pensacola.

"Maculo-Anaesthetic Leprosy," J. Lee Kirby-Smith, Jacksonville.

"Benign Rectal Stricture Treatment with Carbon Dioxide Snow," Jack Halton, Sarasota.

## MEETING OF THE HOUSE OF DELEGATES

The meeting of the House of Delegates was called to order at 5 p. m., April 2nd, by Dr. Frederick J. Waas, president. The delegates elected by the various county societies were then called with instructions that if the delegates were not present, the alternates, if present, should be seated. The roll call of the secretary showed the following delegates, alternates or substitutes present:

### DELEGATES

ALACHUA COUNTY MEDICAL SOCIETY

T. B. King

BREVARD COUNTY MEDICAL SOCIETY

W. J. Creel

BROWARD COUNTY MEDICAL SOCIETY

H. A. Walker

COLUMBIA COUNTY MEDICAL SOCIETY

L. M. Anderson

DADE COUNTY MEDICAL SOCIETY

M. J. Flipse

Mary Freeman

DESOTO-HARDEE-HIGHLANDS COUNTY MEDICAL SOCIETY

H. P. Bevis

DUVAL COUNTY MEDICAL SOCIETY

H. H. Harris

R. H. McGinnis

R. B. McIver

J. D. Love

L. M. Limbaugh

Ralph N. Greene

ESCAMBIA COUNTY MEDICAL SOCIETY

J. M. Hoffman

H. L. Bryans

HILLSBORO COUNTY MEDICAL SOCIETY

D. D. Martin

L. J. Efrid

E. H. McRae

JACKSON COUNTY MEDICAL SOCIETY

N. A. Baltzell

LAKE COUNTY MEDICAL SOCIETY

M. M. Hannum



## LEON-GADSDEN-LIBERTY-WAKULLA-JEFFERSON

COUNTY MEDICAL SOCIETY

H. E. Palmer

J. C. Davis, Jr.

## MANATEE COUNTY MEDICAL SOCIETY

T. M. McDuffee

## MARION COUNTY MEDICAL SOCIETY

J. L. Chalker

H. F. Watt

## ORANGE COUNTY MEDICAL SOCIETY

H. S. Geiger

G. S. Osincup

G. H. Edwards

C. D. Christ

## PALM BEACH COUNTY MEDICAL SOCIETY

G. M. Dawson

C. W. Shackelford

## PASCO-HERNANDO-CITRUS COUNTY MEDICAL SOCIETY

G. R. Creekmore

## PINELLAS COUNTY MEDICAL SOCIETY

O. O. Feaster

W. C. McConnell

H. E. Winchester

S. A. Dawson

## POLK COUNTY MEDICAL SOCIETY

Herman Watson

R. H. Mooty

## PUTNAM COUNTY MEDICAL SOCIETY

E. W. Warren

## ST. JOHNS COUNTY MEDICAL SOCIETY

W. D. Webb

ST. LUCIE-ORKEECHOBEE-INDIAN RIVER-MARTIN  
COUNTY MEDICAL SOCIETY

H. D. Clark

## SUMTER COUNTY MEDICAL SOCIETY

S. C. Wood

## VOLUSIA COUNTY MEDICAL SOCIETY

J. Ralston Wells

Bay, Hamilton, Lee, Madison, Monroe, Sarasota, Seminole, Suwannee, Taylor and Walton-Okaloosa County Medical Societies were not represented.

The president read the following telegram: "Best wishes for a successful meeting," signed, Senators Turner and Dell.

The president then stated that by reapportionment, the Association was entitled to two delegates to the American Medical Association and that Dr. John E. Helms of Tampa was to serve for another year. There being one delegate to be elected, nominations were declared in order. Dr. Shaler Richardson, Jacksonville, and Dr. James D. Love, Jacksonville, were nominated. The president then ruled that the nominee receiving the smaller number of votes would be declared the alternate delegate. Dr. Richardson was elected as delegate for a period of two years; Dr. Love elected alternate for a period of two years.

The next order of business was the selection of a meeting place for 1930. Escambia County extended an invitation to meet in Pensacola. Motion was made, seconded and carried that the next annual meeting be held in Pensacola.

The president then read the following resolution from the Florida Hospital Association, which was accepted as information:

## RESOLUTION

Having been advised of the recommendations which are proposed by Dr. John E. Boyd, Chairman, Hospital and Medical Education Committee, Florida Medical Association, in connection with the annual report of the activities of that Committee,

*Be it resolved*, That the Florida Hospital Association, Incorporated, in regular annual convention at St. Augustine, Florida, hereby endorse the recommendations to which reference has been made insofar as they relate to hospitals in Florida.

*Be it further resolved*, That a copy of this resolution, bearing the signatures of the President and Secretary of the Florida Hospital Association, Incorporated, be properly submitted to the President of the Florida Medical Association in advance of the regular annual convention of said Medical Association in St. Augustine April 2nd and 3rd, 1929.

Unanimously approved April 1st, 1929.

THE FLORIDA HOSPITAL  
ASSOCIATION, INCORPORATED.

By A. J. McRae, M.D.,  
President.

Louisa B. Benham,  
Executive Secretary.

Dr. Waas read the following motion made by Dr. H. C. Dozier at the Second General Meeting and referred to the House of Delegates for action:

"I move that the Second General Session recommend to the House of Delegates that the Hospital and Medical Education Committee be made a permanent committee of the Florida Medical Association according to the recommendations contained in the report read by the chairman, Dr. Boyd."

Dr. Dozier took the floor and stated that the only thing in Dr. Boyd's report referring to this committee was that he recommended that it be made a permanent committee of the organization and also that three members be appointed to serve as follows: one for a period of three years, one for two years and one for one year, the vacancy created each year being filled by appointment to a three-year service.

Dr. Richardson: "I would like to suggest that next year the General Session take action to incorporate the sense of the motion in the By-laws of the Association. As the motion now stands this committee may be appointed by the President. He has the power to appoint this committee. It can be brought up at the General Session next year, and if the General Session so wills, the By-laws can be amended to provide for this Committee."

Motion made, seconded and carried to continue the committee, making the terms of the members as recommended by Dr. Boyd and await the regular method of changing the By-laws for making the committee permanent.

Dr. Waas announced that an application for a

charter as a component society of the Florida Medical Association had been presented by the doctors of Washington and Holmes counties. Motion made, seconded and carried to grant this charter.

Dr. C. D. Christ, Orlando, then stated that at the fifty-fifth annual meeting of the Association held at Tampa, a committee was appointed to consider the advisability of establishing honorary memberships. This committee recommended that Article 5 of the Constitution be amended to include:

"Section 5. Honorary and retired members of the Florida Medical Association may be elected by the House of Delegates or by the Executive Committee either directly or upon nomination officially made by a component County Medical Society. An honorary or retired member shall be exempt from all dues in this Association; shall not have the right to vote; shall be permitted to subscribe for the publication of the Association at a special price to be made by the House of Delegates or Executive Committee; shall have the right to attend meetings and be eligible to such other privileges as may be granted by the House of Delegates."

This having been presented in open meeting, will have to be sent officially to each component society at least two months before the session at which final action is to be taken.

Motion by Dr. Flipse of Miami that the House of Delegates recommend to the Executive Committee that the annual meeting be held not earlier than the first of May of next year. Motion seconded, and after discussion, duly passed.

There being no further business to come before the House of Delegates, upon motion made and seconded, the meeting adjourned.

#### SCIENTIFIC ASSEMBLY

The second meeting of the Scientific Assembly convened at 9 a. m., April 3rd. The following papers were read and discussed:

"Pyelovenous Backflow," Louis Orr, Orlando.

"Woodruff Catheter Technique in Modern Cystoscopy and Uretero-Pyelography," Roy J. Holmes, Miami.

"A discussion of Perinephritic and Parane-phritic Abscess," James L. Estes, Tampa.

"Pyelitis in Infancy and Childhood," Douglas D. Martin, Tampa.

"The Factors in the Successful Feeding of Infants and Children," Wm. E. Sinclair, Orlando.

"Anorexia in Children," Council C. Rudolph, St. Petersburg.

"Scarlet Fever Antitoxin," Luther Holloway, Jacksonville.

#### THIRD GENERAL SESSION

The General Session of the Florida Medical Association again convened at 2 p. m., Wednesday, April 3rd. The meeting was called to order by Dr. Frederick J. Waas, president. The chair declared nominations for president in order.

Dr. G. H. Edwards was nominated for president by Dr. James D. Love of Jacksonville. The nomination was duly seconded. Dr. H. C. Dozier was nominated for president by Dr. L. M. Anderson of Lake City. Nomination duly seconded. Vote by ballot resulted as follows: Dr. Dozier, 92; Dr. Edwards, 61. Upon motion by Dr. G. H. Edwards, duly seconded and carried, the secretary cast a unanimous ballot for Dr. Dozier.

Dr. Dozier was then escorted to the Chair by Dr. J. S. Helms and Dr. L. M. Anderson and expressed his appreciation for the honor that had been conferred upon him. He then declared nominations for vice-president in order.

Dr. W. E. Burnett was nominated for first vice-president by Dr. Ralph N. Greene of Jacksonville. The nomination was duly seconded. Dr. A. M. C. Jobson was nominated for first vice-president by Dr. G. H. Edwards of Orlando. Nomination duly seconded. Vote by ballot resulted as follows: Dr. Burnett, 78; Dr. Jobson, 22. Chair declared Dr. Burnett elected.

Dr. Burnett was then escorted to the Chair by Dr. J. S. McEwan and Dr. J. M. Irwin.

Dr. J. M. Hoffman, Pensacola, was nominated for second vice-president by Dr. M. A. Lischkoff, Pensacola.

Motion made by Dr. W. M. Rowlett that the second and third vice-presidents be nominated on the same ticket to conserve time. Motion seconded and carried.

Dr. J. W. Snyder, Miami, nominated for third vice-president by Dr. Roy Holmes, Miami.

Motion made by Dr. H. H. Harris of Jacksonville that nominations be closed. Motion seconded and carried. Motion by Dr. Rowlett that the secretary be instructed to cast the ballot for the nominees. Motion seconded and carried. Dr. J. M. Hoffman declared elected second vice-president and Dr. J. W. Snyder declared elected third vice-president.

Dr. Shaler Richardson, Jacksonville, nominated for secretary-treasurer by Dr. L. M. Anderson of Lake City. Motion by Dr. Ralph N. Greene that the nomination be closed and the president be authorized to cast ballot for the nominee. Motion seconded and carried. In accepting the election, Dr. Richardson expressed his appreciation of the honor again conferred upon him.

Dr. J. S. Helms was then appointed by Dr. H. C. Dozier to present the past president's emblem to the retiring president, Dr. Frederick J. Waas.

Upon motion by Dr. H. Marshall Taylor, Jacksonville, duly seconded and carried, the privileges of the floor were accorded to Mr. C. P. Loranz, secretary-manager of the Southern Medical Association, who addressed the meeting as follows:

"It is a great pleasure to be with you today. In the seventeen years it has been my privilege to be your secretary of the Southern Medical Association, it has never been my privilege to meet with you in your State. Perhaps but one man did as much in the early days for the Southern Medical Association that gave it life and gave it vitality at a time when it was a weak struggling infant, one who was from Florida, one whose memory we cherish, one whose picture hangs over my desk in Birmingham—and that is the late Dr. James M. Jackson. I am delighted to be in his State again, and would like to pay a little tribute to the memory of a man from Florida who had a big part in making the Southern Medical Association what it is today. A man said to me once several years ago, 'Well, if Jackson had not died we would have met in Florida long ago.' I think that is true. I am glad we are coming back again to Florida, to his home State and to his home city.

"We hope that the Miami meeting will stand out in the history of the Southern Medical Association as one of the greatest meetings, and we are counting on you—the men of Florida—to help us put it across in a big way. There is one point that I would like to emphasize: that is that every one of you be busy during the next few months among your doctor friends, particularly those outside of the State. Drop them a line and suggest that this is a fine time to see Florida. When I was in Miami several months ago the local paper had an editorial and I read in it, 'You haven't seen the United States until you have seen Florida, and you haven't seen Florida until you have seen Miami.' You write and tell your doctor friends outside of the State that. And

suggest to your patients that have moved in from out of the State that they drop a line to the home Doctor where they came from, that this would be a fine time to see Florida, and to see Miami. Let's just everybody get behind it and put the Miami meeting across in a big way to the honor of Florida and to the honor of Miami."

Motion by Dr. L. M. Anderson, Lake City, that a committee of three be appointed to draw up and submit to the Senators and Representatives at Washington a resolution for the establishment of an Old Soldiers' Home in Florida.

Motion seconded and carried.

Dr. E. W. Warren of Palatka then read in open meeting the following proposed change in the Constitution: that article 7 be amended to include Section 2-a as follows:

"Section 2-a. The nominating committee shall consist of the last five past-presidents of the Association and this committee shall nominate all officers of the Association for election for the ensuing year. Additional nominations may be made from the floor."

Dr. Shaler Richardson called attention to the fact that this information must be sent to each of the component societies of the Association two months before the next annual meeting.

Dr. John S. McEwan, Orlando, then moved that the President appoint a committee to revamp the Constitution and By-laws to bring them up to date, and to present them at the next annual meeting. Motion seconded and carried.

Meeting adjourned upon motion, duly seconded and carried, *sine die*.

#### SCIENTIFIC ASSEMBLY

The third meeting of the Scientific Assembly convened at 2 p. m., April 3rd. The following papers were read and discussed:

"The Newly Created Specialty, Aviation Medicine," Ralph N. Greene, Jacksonville.

"Reduction of Closed Fractures with Local Anesthetic," E. H. McRae, Tampa.

"Laryngeal Tuberculosis and Its Treatment by the Electrocautery," H. Marshall Taylor, Jacksonville.

"Surgery in the Diabetic," Alex M. C. Jobson, Tampa.

"Radium in the Treatment of Uterine Hæmorrhage," Gerry R. Holden, Jacksonville.

"The Surgical Treatment of Exophthalmic Goitre," John S. Helms, Tampa.

"Hypothyroidism and Low Metabolic Rate, Their Relation to the South," T. Z. Cason, Jacksonville.



## REGISTRATION

The following registered during the Fifty-sixth Annual Meeting of the Florida Medical Association, held at St. Augustine, April 2nd and 3rd:

## OFFICERS

Waas, F. J., President.....Jacksonville  
Lischkoff, M. A., V.-Pres. ....Pensacola  
Richardson, Shaler, Sec'y-Treas. ....Jacksonville  
Thompson, Stewart G., Business Manager..Jacksonville

*Alachua County Medical Society*

Biggs, E. L. ....Starke  
Colson, J. H. ....Gainesville  
Dailey, I. A. ....Micanopy  
Floyd, G. M. ....Hawthorne  
Goode, J. A. ....Alachua  
King, T. Byron ....Gainesville  
Preston, H. F. ....Melrose  
Summerlin, J. L. ....Gainesville  
Thomas, W. C. ....Gainesville  
Tillman, G. C. ....Gainesville  
Whitaker, C. D. ....Raiford  
Whitlock, W. E. ....High Springs

*Brevard County Medical Society*

Bean, I. F. ....Melbourne  
Creel, W. J. ....Eau Gallie

*Broward County Medical Society*

Hendricks, E. M. ....Ft. Lauderdale  
Lingeman, R. B. ....Ft. Lauderdale  
Robinson, L. F. ....Ft. Lauderdale  
Walker, H. A. ....Hollywood

*Columbia County Medical Society*

Anderson, L. M. ....Lake City  
Bates, T. H. ....Lake City  
Harkness, R. B. ....Lake City  
Rogers, A. E. ....Lake City

*Dade County Medical Society*

Burch, R. N. ....Miami  
Clegghorn, C. D. ....Miami  
Flipse, M. J. ....Miami  
Freeman, Mary ....Perrine  
French, E. D. ....Miami  
Gowdy, F. A. ....Miami  
Hall, John E. ....Miami  
Harris, R. M. ....Miami  
Hodsdon, B. F. ....Miami  
Holmes, R. J. ....Miami  
Kitchens, F. E. ....Coral Gables  
Litterer, A. B. ....Miami  
Lucinian, J. H. ....Miami  
McKenzie, O. G. ....Miami  
McKibben, W. W. ....Miami  
Payton, F. J. ....Miami Beach  
Pearson, R. J. ....Miami  
Snyder, J. W. ....Miami  
Tumlin, C. E. ....Miami  
Vogt, F. A. ....Miami  
Walters, A. L. ....Miami Beach

*DeSoto-Hardee-Highlands County Medical Society*

Bevis, Henry P. ....Arcadia

*Duval County Medical Society*

Arms, B. L. ....Jacksonville  
Bayless, W. C. ....Jacksonville  
Beals, John A. ....Jacksonville  
Black, J. B. ....Jacksonville  
Blackmar, R. W. ....Jacksonville  
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## OUR PRESIDENT

Dr. Henry Cuttino Dozier, the new president of the Florida Medical Association, was born in Fernandina, Florida. After finishing his preliminary education, he attended the University of Pennsylvania, from which he graduated with the class of 1903. During his under-graduate days, he was a member of the Southern Club, Charles K. Mills Neurological Society, the Alpha Kappa Kappa Medical Fraternity and the Kappa Sigma College Fraternity.

Dr. Dozier is a past president of the Seaboard Airline Surgeons' Association, past president of the Florida Railway Surgeons' Association, past first vice-president of the Florida Medical Association, past president of the Central Florida Medical Association, president of the Marion County Medical Society and president of the Staff of the Munroe Memorial Hospital.

He entered the service during the World War in 1917 as captain, medical reserve corps, and received his military training at Camp Greenleaf, Chickamauga Park. After two months, he was transferred to the School of Orthopedic Instruc-

tion under Dr. Emil Giest of Minneapolis. He later spent three months in the Cincinnati General Hospital under instruction of Drs. Fruberg and Coffield, and then was assigned to duty as orthopedic surgeon at Camp Funston, Kansas. After nine months, Dr. Dozier was transferred to the United States General Hospital No. 28, at Fort Sheridan, Illinois, where he remained another nine months as one of the operating surgeons under Major Ryerson. He was discharged in July, 1919, with the rank of Major, M. R. C.

After his discharge from the army, Dr. Dozier was for eighteen months chief examiner for the Fifth Florida Unit of the United States Veterans' Bureau at the end of which time the Bureau was discontinued. He is at present a member of the American Legion, and a past Commander of the Marion County Post No. 27.

### EARLY DIAGNOSIS OF TUBERCULOSIS

"I hold every man a debtor to his profession," wrote Francis Bacon. The observation applies particularly to the medical man. He deals with the human body of intricate construction and composition only slightly understood. Irrespective of degree of specialization in medical practice in this age of specialism, it is the family physician and general practitioner that makes the first contact with disease, and it is to him we must look for the discovery of the early evidence of tuberculosis.

The general practitioner in his regular routine is, or should be, familiar with the physical defects of his clientele, and it becomes his province and duty to advise his patrons of what he discovers and to teach them how to live. The word "Doctor" literally means "Teacher." When disease is present the doctor, as a matter of course, earnestly and faithfully assists nature toward restoration in every way known to science, but his duty does not end there; he should feel himself obligated to inform contacts how to avoid the infection.

Equally interested in the problem of prevention and early diagnosis of tuberculosis in this State is the Florida Public Health Association. This organization, consisting of public-spirited altruistic men and women, functions independently, yet has the approval and is in coordination with the Florida State Board of Health. The organization is supported by membership contributions and the funds received from the sale of Christmas seals. It should receive the support of every medical man.

Through the efforts of such an organization in nearly every state in the Union, affiliated with the great National Tuberculosis Association and allied agencies, the mortality from tuberculosis has decreased 40 to 50 per cent in the past twenty-five years. No small amount of this decrease may be accredited to the work of physicians in discovering the disease in its early stage.

The mortality can be lowered to even greater extent in the near future than in the past if only the physician will apply the means at his disposal in many and repeated examinations. The slogan, "Submit to a physical examination on your birthday," should meet the approval of physicians without the stigma of commercialism being attached to it.

### A MESSAGE FROM PRESIDENT HENRY C. DOZIER, M.D.

One of the first duties of a newly elected president is to appoint qualified members to serve on the various committees. Our Association is fortunate in having in its membership a host of capable doctors from which to select the few individuals necessary to fill appointments on the various committees for the ensuing year. I have every assurance that the men selected are especially well qualified to promote the interests of organized medicine. To aid the members of the various committees, when help or counsel is needed, I have appointed an auxiliary to each committee, which will respond to the call of the chairman of the standing committee. Information concerning standing committees will be found on page 509 of this Journal; auxiliary committees have been appointed for the ensuing year as follows:

#### AUXILIARY TO SCIENTIFIC PROGRAM COMMITTEE

J. B. FARRIOR, M.D., Tampa—Eye, Ear, Nose & Throat.  
G. S. OSINCUP, M.D., Tampa—Children.  
JOHN E. HALL, M.D., Miami—G. U.

My suggestion to the Scientific Program Committee is that only six papers be scheduled for each Scientific Assembly and that only one member be officially placed on the program for the discussion of each paper, thereby leaving the balance of the time available for discussion open to the entire Association. I would further suggest that the papers pertaining to each specialty and those of general interest be grouped accordingly, thereby making it possible for those interested only in a certain specialty to attend that group, and remain or play according to their wishes at other times.



# AUXILIARY TO COMMITTEE ON LEGISLATION AND PUBLIC POLICY

Each Councilor of the State Association.

It is my desire that each Councilor make every possible effort, by letter, personal contact and telegram to explain the Basic Science Bill to his representatives at Tallahassee and to secure, if possible, their favorable consideration of the measure, always working through the direction and in cooperation with Dr. Watson, the chairman of the standing committee, and reporting development and progress to him. My official and personal views are given later in this communication.

## AUXILIARY TO HOSPITAL AND MEDICAL EDUCATION COMMITTEE

L. M. ANDERSON, M.D., *Chairman* . . . . . Lakeland  
H. E. PALMER, M.D. . . . . Tallahassee  
J. H. PIERPONT, M.D. . . . . Pensacola

It is desired especially to call to the attention of the Hospital and Medical Education Committee, and its auxiliary, the report of the Hospital and Medical Education Committee of last year, read at our recent meeting held in St. Augustine. This report was adopted by the Association and a proposed amendment to the By-laws read into the minutes which, if passed at the next annual meeting, will make this a regular and permanent committee of the Association.

As your president, I desire to suggest a policy and a general method of procedure to be adopted by the Committee on Legislation and by the Councilors, whom I hereby appoint as an auxiliary group to work, each in his own district and with his particular representatives and senators, under the general supervision of the Chairman. I desire also that each Councilor regard himself as vitally interested in our legislative program, that he assume a personal responsibility for its success in his own district, and that he give the Chairman the benefit of his experience, knowledge, counsel and advice as they effect our success in the state at large. It is not my desire to dictate a hide-bound procedure but to leave to the good judgment of the Committee and the Councilors the choice of methods which they may deem best for the carrying out of the general policy.

It is my belief that the passage of the Basic Science Act can best be accomplished by the home physician: first, by his explaining to his representatives, to whom he is known, our motives in desiring the passage of the act; second, by defining the terms "anatomy", "physiology," "chemistry," "bacteriology" and "pathology" in simple

terms understandable to the layman; third, by appealing to his sense of justice and intelligence.

Let us now elaborate these methods from the viewpoint of the Florida Medical Association:

First: What is our motive in wishing the passage of this law? It is certainly not the jealousy of one school of medicine for another; it is certainly not the desire to rid the state of any one school of the healing art, because the law affects all schools of healing equally and, not being retroactive, it certainly does not affect any individual practitioner of any school now practicing in the state.

Second: What are simple definitions of the terms of the law? The Florida Medical Association desires that the giving by the state of a license to a practitioner of any school of treatment be a guarantee to the public, from which is constituted the patients desiring healing, that, no matter from what Board of Examiners the practitioner may have received his license, he has at least an elementary knowledge of the organs and tissues of the normal human body, which is anatomy; that he knows something of the functions of the organs and tissues, which is physiology; that he knows something of the changes and manner of accomplishment of such functions as breathing, digestion, assimilation of the food elements, which is chemistry; that he knows the causes of diseases, which is known as bacteriology; that he is aware of the changes produced in our organs and tissues by the presence of disease, which is pathology.

Third: In what way may an appeal to the layman be made? I believe that any layman will agree that if any man desires to treat the diseases of the human body he should know something of the body he is treating, in order to do so intelligently and to the best interests of the patient. It should not be possible to graduate in the basic sciences of the healing art from a garage, a barber shop or a bath-house and then in a few months to be turned loose on a trusting and unsuspecting public by the state through the granting of a license to practice medicine by one of the duly constituted Boards of Examiners, any more than that a pre-medical course would prepare a man for the study of engineering or the practice of business administration and finance. The Florida Medical Association does not desire to dictate to anyone the kind of treatment that he shall have when he is ill; it wishes only that the state protect its citizens from unprincipled and ig-

norant practitioners of whatever school by the passage of the Basic Science Act. We desire only that the standards of all schools of the healing art shall be raised and that a man, when he employs a practitioner of any school, gets a good one, one that has at least an elementary knowledge of the body that he is treating.

By such an explanation of our motives, by such simple definitions and by such an appeal to common sense and justice, more can be accomplished than by the usual lobbying methods.

It is my desire that the Association keep a representative in Tallahassee until the time when this act is disposed of, one not as a lobbyist in the ordinary acceptance of the term, but as the official representative of the Florida Medical Association, who shall act as consultant for the purpose of explaining to the legislators the wishes of the Association and of using persuasion and arguments to bring about a favorable action on the Basic Science Act. I oppose unalterably any methods of bribery and desire that the campaign be waged with the dignity, the intelligence and the honesty of purpose that should characterize the actions of a great profession.

A deluge of telegrams, night letters, personal letters from the home physician in every district in this state to his representatives, and the careful explanation by the chairman and by his legislative committee, in any manner and through any method which they deem best, will make such an impression on Tallahassee as has never been made before.

I earnestly solicit your sincere interest in the passage of this act and your cooperation with me in all things for the upbuilding of the profession of the state and of our Association.

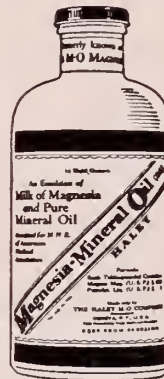
#### M. L. CRUM

Dr. M. L. Crum, of Arcadia, died very suddenly on February 17th. Death was due to heart disease.

#### C. M. MERRILL

Dr. C. M. Merrill, of Palm Beach, died April 21st at the age of 73 years. Dr. Merrill was a graduate of the University of New York Medical College, class of 1881. He was a pioneer of West Palm Beach, where he for many years practiced his profession.

## ANNOUNCING a change in name HALEY'S M-O is now known as MAGNESIA-MINERAL OIL (25) HALEY Accepted for N. N. R. of the American Medical Association



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## STATE NEWS ITEMS

An address by Dr. John Musser, Professor of Medicine at Tulane University, New Orleans, featured the annual banquet of the Duval County Medical Society held Tuesday evening, March 5th, at the Windsor Hotel, attended by 150 members and out-of-town guests. Dr. Musser's topic was "Certain Disorders of the Blood."

Dr. Edward Jelks, president of the society, acted as toastmaster. Dr. Frederick J. Waas, president of the Florida Medical Association, delivered a talk and Dr. R. H. McGinnis introduced the principal speaker. Numbers by the Shrine Quartet were included in the entertainment numbers.

The dinner, probably the most successful and enjoyable affair in a number of years, was arranged by a committee consisting of Dr. Robert B. McIver, chairman; Dr. W. McL. Shaw and Dr. Ferdinand Richards. Out-of-town guests were Drs. H. Mason Smith and W. M. Rowlett, Tampa; Drs. G. C. Tillman and James Maxey Dell, Gainesville, and Dr. E. S. Estes of St. Augustine.

\* \* \*

The DeSoto-Hardee-Highlands County Medical Society recently passed the following resolutions of condolence for Doctor M. L. Crum, of Arcadia:

*Whereas*, God in his infinite wisdom has seen fit to call from our midst our beloved friend and colleague, Doctor Murdock Lee Crum, in his marked usefulness of life, leaving sadness in our hearts as well as a great loss to those he served, and;

*Whereas*, the human mind, seeing as through glass darkly, does not question the wisdom of the Divine Healer, but submits in humbleness to this call, therefore, be it resolved;

First, that we offer these resolutions of respect to his memory and cherish the pleasant recollection of our relations with our brother, and;

Second, that we extend to his loved ones our sentiments of condolence and sympathy in their bereavement and assure them that we share the feeling of loss with them, and;

Third, that a copy of these resolutions be furnished to his wife and that a copy be spread upon

the minutes of the Society, and that a copy be sent to the Journal of the Florida Medical Association.

C. H. KIRKPATRICK,  
H. P. BEVIS,  
G. F. HIGHSMITH,  
*Committee.*

\* \* \*

Dr. Harold D. Van Schaick announces the removal of his offices to 210 St. James Building, Jacksonville.

\* \* \*

Dr. John A. Simmons, ex-president of the Florida Medical Association, announces the removal of his offices from Miami to Arcadia.

\* \* \*

The following program was presented at the March meetings of the Pinellas County Medical Society:

"Five Cardinal Points in the Diagnosis of Pulmonary Tuberculosis"—Wm. DeWitt, Director of one of Pennsylvania's well-known sanatoria.

"Achyilia Gastrica and its Significance in Relation to Other Diseases" (with lantern slides)—John A. Lichty, Director of Clifton Springs Sanitarium and Clinic, Clifton Springs, N. Y.

"Extroversion and Introversion and Their Relation to Dementia Præcox and Manic Depressive Insanity"—Clarence A. Neymann, Professor of Neurology at the Northwestern University, Chicago.

Motion pictures showing the functioning of the alimentary tract.

"Anorexia in Children"—C. C. Rudolph, St. Petersburg.

\* \* \*

Dr. J. Frank Wilson announces the removal of his offices to Suite 310-12 Greenleaf and Crosby Building, Jacksonville. Practice limited to dermatology.

\* \* \*

At a meeting of the DeSoto-Hardee-Highlands County Medical Society held at Sebring, March 12th, Dr. G. F. Highsmith, of Arcadia, was elected secretary of that society, to succeed Dr. M. L. Crum, who recently died. Dr. C. H. Kirkpatrick, of Arcadia, presented a paper on "Transfusion."

\* \* \*

It has been announced that the Northern Methodist Church contemplates the erection of a negro hospital in Jacksonville in the near future.



Dr. Herbert Caldwell, of Lake City, left recently for Washington, where he expects to do post-graduate work.

\* \* \*

Dr. Grace Whitford, of Ozona, recently returned from Havana.

\* \* \*

The Suwannee River Medical Society held its March meeting at the Hotel Blanche in Lake City. The scientific program consisted of a paper on "Maxillary Sinusitis" by Dr. W. S. Nichols. Dr. L. M. Anderson read a case report, "A Difficult Fracture of the Hip." Physicians in attendance were as follows: Drs. Long, Davis and Yates, of Madison; Bruce of Jasper, Green of Mayo, West, Price, Strickland, of Live Oak; Arnold, L. M. Anderson, Harkness, Bates, Dyer, Ives and Nichols, of Lake City.

\* \* \*

Dr. Alton Ochsner, Tulane University, New Orleans, recently read a paper entitled, "The Use of Iodized Oil," before the Escambia County Medical Society.

\* \* \*

The Manatee County Medical Society held its March meeting at the Dixie Grande Hotel in Palmetto. Dr. John S. Helms, of Tampa, addressed the society on "Goitre." Dr. H. Mason Smith, of Tampa, read a paper on "The Nervous Child." Other guests were Dr. Joseph Halton, of Sarasota, and Doctors Spengler and Andrews of Tampa.

\* \* \*

The American Psychiatric Association, The American Association for the Study of Epilepsy, the American Association for the Study of the Feeble-minded and allied Associations will hold their annual convention in Atlanta during the week of May 13th this year. Dr. N. M. Owensby, of Atlanta, is chairman of the Committee on Arrangements and will be glad to furnish guest badges to any members of the Florida Medical Association desiring to attend the meeting.

\* \* \*

There exists in Vienna, Austria, the American Medical Association of Vienna, which is a well-developed organization that exists for the purpose of facilitating postgraduate medical work for English-speaking physicians. All of the English medical courses given under the auspices of the University of Vienna are administered through this organization. For further information address American Medical Association of Vienna, Vienna VIII, Alserstrasse 9, Austria.

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Volume XLVII, Page 1488

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## TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE NATIONAL  
TUBERCULOSIS ASSOCIATION

"Early Discovery—Early Recovery; Let Your Doctor Decide" is the slogan of an educational campaign being actively promoted among the public during April, 1929, by tuberculosis and health associations throughout the country. Emphasis is being placed on the need of discovering tuberculosis in children before it has become manifest pulmonary tuberculosis. While latent tuberculosis in children is not, per se, an immedi-

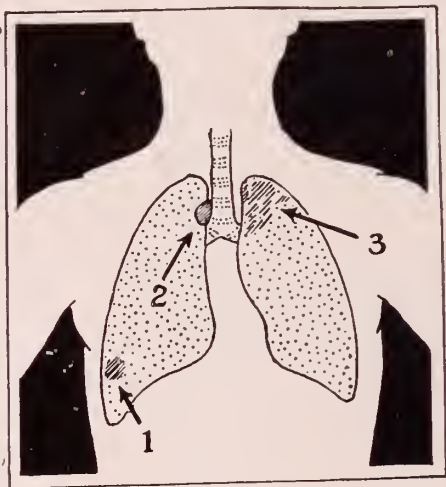


Diagram of lungs, showing how tuberculosis sometimes develops. 1. The first tubercle; 2. Lung gland which has been attacked by tubercle bacilli; 3. Disease of lung substance, which may spread to other parts of the lung.

(Illustration from booklet, "Do Children Have Tuberculosis?" designed to interest parents in latent tuberculosis.)

ately serious condition, its discovery is of extreme importance, for it enables the physician to institute those measures which may prevent the development of manifest disease later in life. This is prevention.

## LATENT TUBERCULOSIS IN CHILDREN

Latent tuberculosis is tuberculosis unaccompanied by significant symptoms or by physical signs. Lesions temporarily latent in this sense invariably precede manifest disease.

The intracutaneous tuberculin test is especially valuable, for by this means sensitiveness to tuberculin can be measured so accurately that two successive tests can be compared. Studies made at the Henry Phipps Institute upon children of families in contact with open tuberculosis and observed over a period of four years showed that

(Continued on page 518)

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Conditions of Maternity
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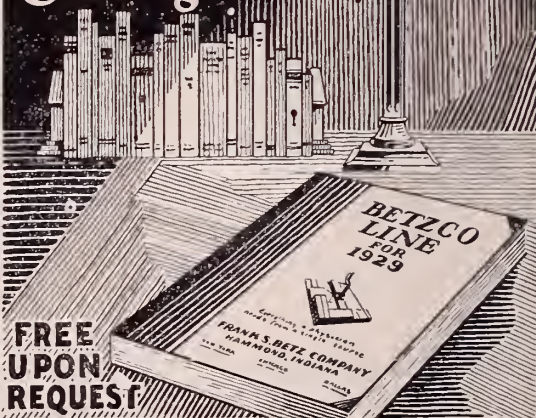
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the tuberculin reaction would often aid in determining whether a lesion recognizable by X-ray was potentially progressive or already healed. An active tuberculin reaction in a child with a tuberculous lesion recognizable by X-ray examination is presumptive evidence that the lesion has not healed.

There is no essential distinction between latent infection shown by an isolated pulmonary nodule and that accompanied by obvious involvement of the tracheo-bronchial lymph glands, for dissections of lungs show that a pulmonary focus is almost invariably found in association with a lesion of the tracheo-bronchial lymph glands. In most instances lesions of these glands are seen in the X-ray picture because there is some deposition of calcium, but massive lesions are sometimes recognizable even in the absence of calcification. In young children there may be, in association with lesions of the lymph glands, wide areas of soft infiltration evident in the peripheral lung field.

Latent tuberculosis of the apex is of greater importance from the standpoint of prognosis than is disease of the tracheo-bronchial lymph glands. It is not infrequently seen in children of about 13 years of age, often in those who are examined as contacts. The lesions are usually indicated by "soft" mottling in the second and third interspaces, occasionally as low as the fourth interspace. The character of these lesions as revealed by X-ray examination differed in no way from lesions found in another group of children where the obvious infiltration was accompanied by rales at one or both apices. The writer, by the way, does not accept the view that all tuberculosis, including the phthisis of adult life, has its origin in early infancy, although he believes that a good deal of the pulmonary tuberculosis of early adult life has its origin during adolescence.

Severe latent lesions are found most often in families in which some member is suffering from open tuberculosis, their frequency increasing with the duration of exposure. X-ray examination of young children in families exposed to tuberculosis will reveal the severer form of latent tuberculosis of the tracheo-bronchial lymph glands at a time when it is still unhealed; while routine examination of adolescent children exposed to open tuberculosis may also result in the discovery of latent apical lesions.

Lesions of the apex may remain latent for a long period before they are revealed by hemorrhage or other symptoms, and what is regarded

(Continued on page 520)

## WHEN ON THE ROAD TO RECOVERY



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It supplies nutrients most needed for the rebuilding of health and strength. By the exclusive Horlick process, these food elements are rendered easily and quickly assimilable. For samples, address — **HORLICK — Racine, Wis.**

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# A new milk modifier and diet supplement with the added value of Vitamin B

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B. RAYMOND HOOBLER, M.D., DETROIT.  
Journal A. M. A., August 4, 1928.

The dangers from Vitamin B deficiency in artificially fed infants are apparent. Vitamin B is essential as a growth and antineuritic factor, as well as for adequate nutrition throughout life. The Vitamin B content of cow's milk is not constant and, when the milk is diluted, the vitamin content is necessarily reduced.

Even mother's milk may be very low in Vitamin B, particularly if the mother does not receive an adequate and balanced diet.

Quoting further from Dr. Hoobler's article:

"It is the consensus of opinion among the laboratory investigators in the fields of nutrition that Vitamin B is the dietary factor which most rapidly stimulates growth, and indeed that it may be the most important factor.

"Not only is this increase in growth brought about by

stimulating the appetite and thus increasing the food intake, but even when the appetite is entirely satisfied and the individual remains on the same basal diet, an increase in Vitamin B substance will cause a gain in weight without necessarily increasing the intake of food. This would indicate that Vitamin B, in addition to stimulating the appetite, also brings about a better assimilation and utilization of the food intake."

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## What Vitavose is

Squibb's Vitavose is a palatable and highly nutritious maltose-dextrin preparation, exceedingly rich in Vitamin B and assimila-

ble iron salts. It contains not only maltose and dextrins but in addition all of the water-soluble extractives from the wheat embryo—Vitamin B, soluble nitrogenous compounds and mineral salts.

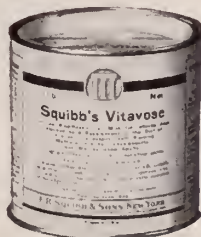
Wheat germs, freed from oil, are cooked, malted and extracted under conditions which preserve the important dietary properties and guarantee a maximum extraction of Vitamin B. The finished product, Vitavose, resembles a fine, golden yellow sugar with an agreeable malty taste.

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# SQUIBB'S VITAVOSE



as incipient tuberculosis of early adult life is often represented by a fibroid lesion which has had its origin during adolescence, and has remained latent for a considerable period of years. The writer insists that no clear insight into the contagion of tuberculosis can be obtained unless latent disease is brought within the field of vision. *E. L. Opie, Amer. Rev. Tub., 1927, 16, 468.*

#### THE DIAGNOSIS OF TRACHEO-BRONCHIAL TUBERCULOSIS

For some seven years the writer has studied the question of radiography of the lungs, to determine what abnormal changes could be conclusively recognized. The subject was approached in two main directions, one to discover what elements of the lung structure might be differentiated by X-ray examination under the simplest conditions, and the other to provide against the effect of cardio-vascular movement in disturbing lung detail.

The first of these questions was studied by radiographing the excised lung, and then comparing the specimen, area by area, with the radiogram. Some 400 pairs of lungs were thus examined, about 150 of which were maintained inflated during exposure. A study of this post-mortem material has convinced the author that calcium infiltration is the sole distinctive radiographic indication of the site of a lymph gland situated within the limits of the mediastinum. Calcium-free glands, however, enlarged, fail to cause perceptible intensification of the mediastinal shadow. Intrapulmonary glands must contain calcium to be recorded radiographically. When they are large, that part of their calcium-free margins which projects beyond the arterial main stem will be recorded by contrast with the pulmonary parenchyma. Re-absorption of calcified caseous necrosis does not appear to occur. Shadows simulating calcification are thrown by vessels axially radiated.

Experience with physical signs in the diagnosis of tracheo-bronchial disease has been disappointing. Prolongation of the whispered voice downwards was common to the third, and sometimes to the fifth, dorsal spine, but the writer was unable to account for it on the basis suggested by d'Espine. Percussion was almost equally unsatisfactory, since there was no constant relation between apparent changes of percussion note and a demonstrable lesion. "It is not easy to understand how lesions other than the massive caseation of fatal infantile tuberculosis, which alone,

(Continued on page 522)

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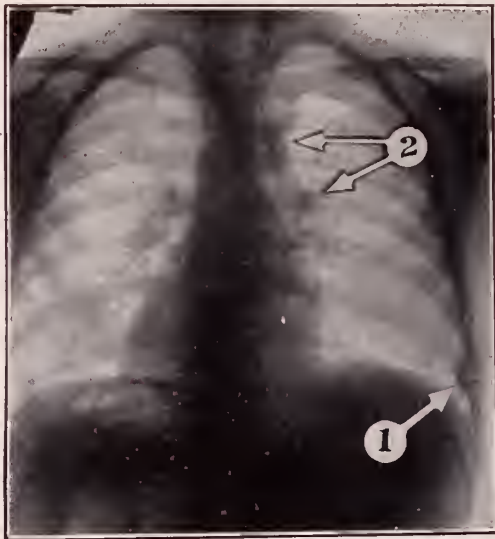
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apart from the malignant tumours, protrudes materially beyond the spinal margin, could supply an anatomic basis for changes in percussion. . . . Nor is there commonly a well-defined basis for those changes in percussion in the interscapular region ascribed to changes in muscle tone."

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X-ray of child's chest, showing (1) primary nodule, and (2) caseous lymph nodes.

Finally, the writer discusses the question of the quantitative tuberculin reaction which he believes is important at those ages at which it is most desirable to recognize the presence, pathologic condition and significance of tracheo-bronchial tuberculosis. A marked reaction to 0.01 mg. of tuberculin (O. T.) in a child under 5 years is sufficient to warrant therapeutic and prophylactic measures, even in the absence of demonstrable lesions. "The presence of a recognizable lesion gravely emphasizes the danger, and rarely before the fifth year will the calcium shadow be other than fine and presumably labile. After the fifth year an intense reaction suggests an active lesion, especially if the calcium infiltration casts a soft shadow."

The diagnosis in the individual of tracheo-bronchial tuberculosis must rest on a demonstrable lesion, and "a definite symptom-complex can be discovered only by study of cases presenting such lesions." *F. M. McPhedran, Amer. Jour. Med. Sciences, 1927, 173, 245.*

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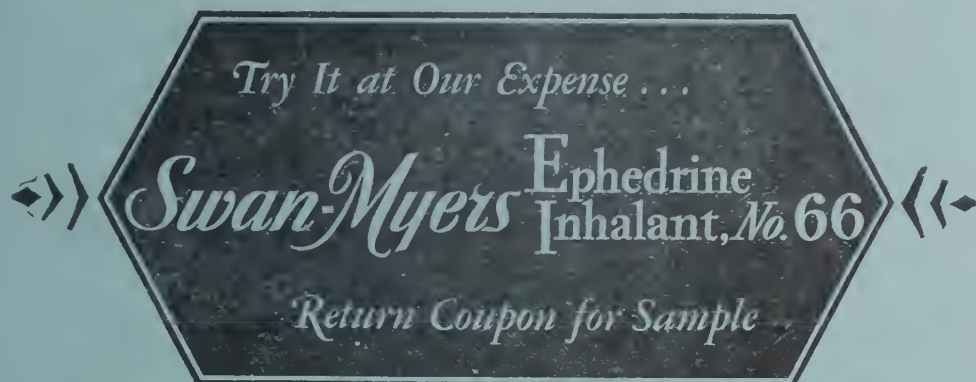
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### CONTENTS

	PAGE		PAGE
Perfected Methods in the Operation for the Bad Risk Goiter Patient .....	537	Intrauterine Injection of Lipiodol as a Diagnostic Aid in Gynecology.....	551
<i>William D. Haggard, M.D., F.A.C.S., Nashville, Tenn.</i>		<i>William M. Rowlett, M.D., F.A.C.S., Tampa.</i>	
Hypothyroidism: Low Respiratory Metabolic Rate— A Preliminary Report .....	542	Nutritional Needs to the Third Year.....	555
<i>T. Z. Cason, M.D., Jacksonville.</i>		<i>Grace Whitford, M.D., Ozona.</i>	
Chronic Endocervicitis .....	547	Editorial: Preventable Deaths .....	558
<i>H. A. Day, M.D., Orlando.</i>		Proceedings of the Tenth Annual Meeting of the Florida Railway Surgeons' Association.....	559
		State News Items .....	559-561
		Tuberculosis Abstracts .....	562-568

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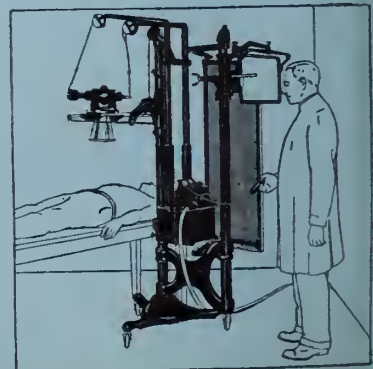
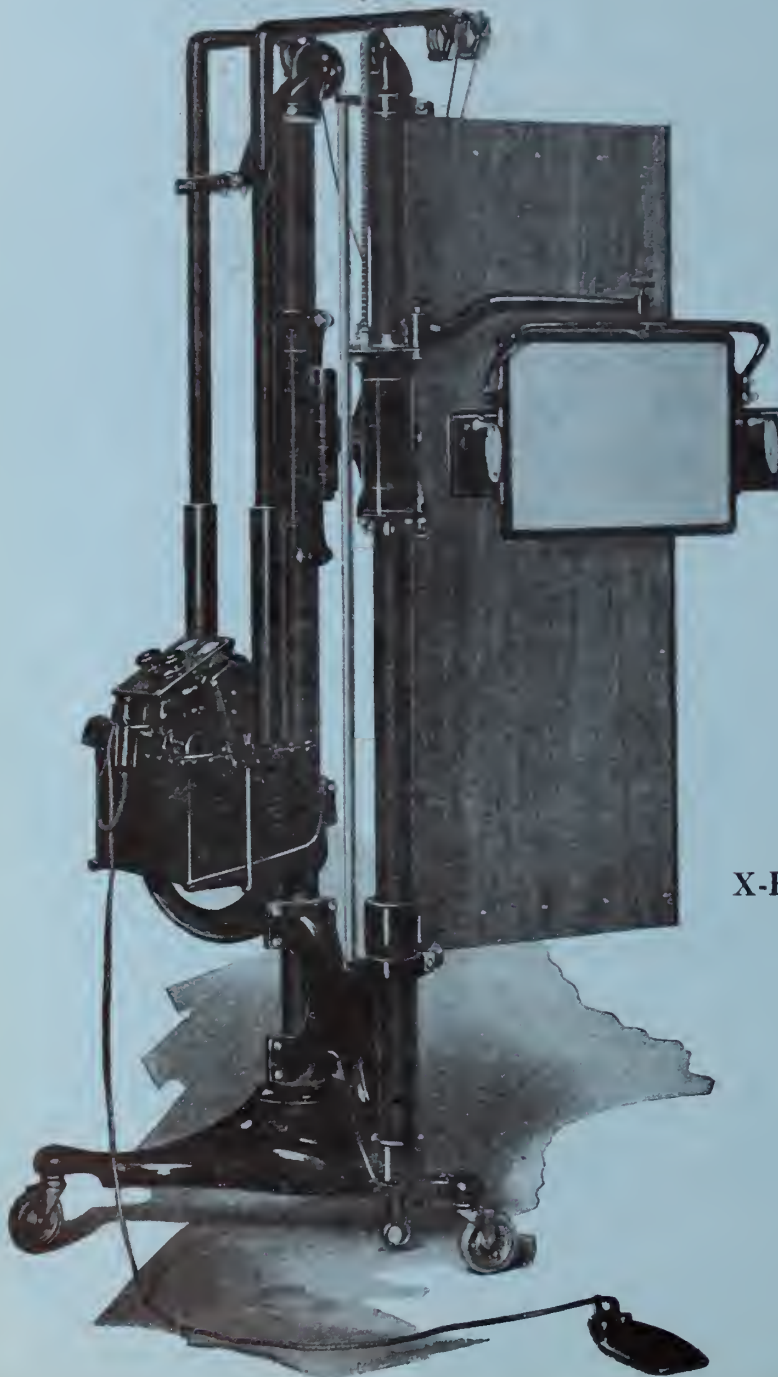
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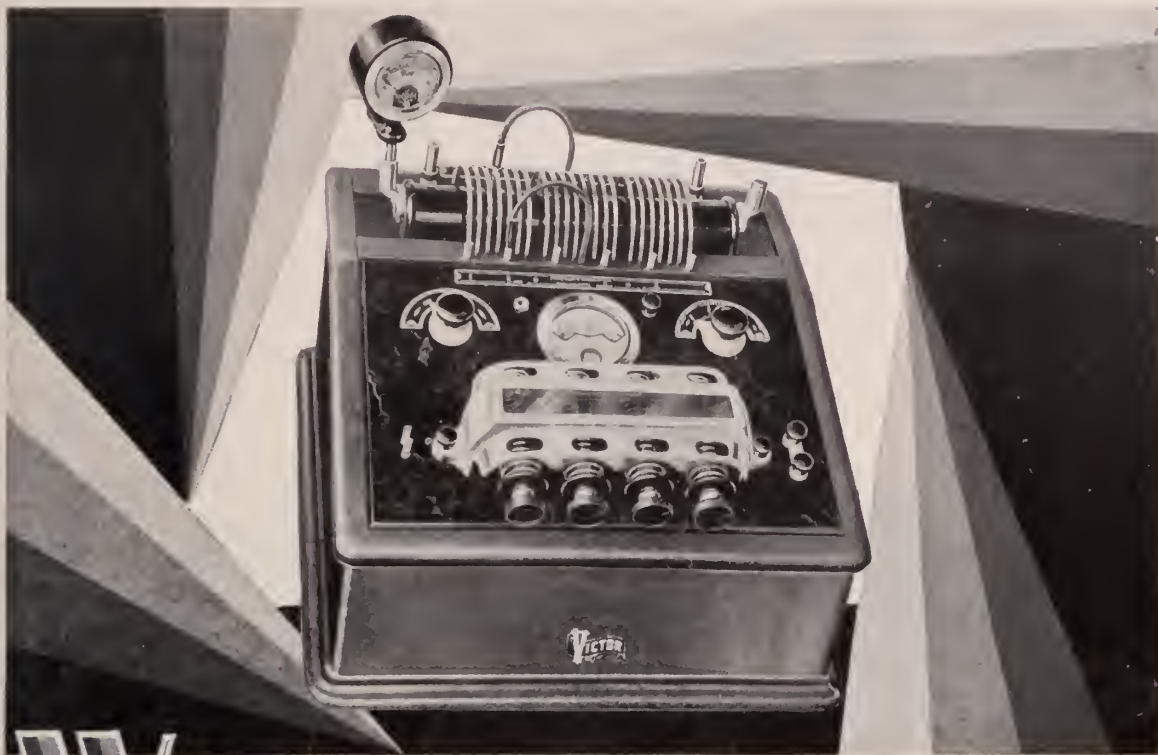
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*\*Journal of Laboratory and Clinical Medicine, 11:116.*

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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

PUBLISHED MONTHLY

Volume XV

Jacksonville, Florida, May, 1929

Number 11

## PERFECTED METHODS IN THE OPERATION FOR THE BAD RISK GOITER PATIENT\*

WILLIAM D. HAGGARD, M.D., F.A.C.S.,  
Nashville, Tennessee.

The thyroid gland is especially designed for the storage and elaboration of the iodine content of the body. The specific secretion of the thyroid is determined by iodine. The total amount of iodine in the body, mostly resident in the thyroid, is only about ten milligrams. Thyroxin, an iodine containing hormone, is the active principle of the thyroid gland. Harrington (1927) reconstructed this physiological, crystalline material synthetically and it is hoped it can soon be manufactured chemically, as is adrenalin. It has a decided effect upon the basal metabolism (heat production) and its increase. Thyroxin is difficult to produce in usable quantities and expensive. The compound tincture of iodine (Lugol's solution) is the most available therapeutic preparation by mouth. A definite iodine effect can be produced regularly by the injection of fifty milligrams of the iodide of potash into a superficial vein. It increases the amount of the iodine in the thyroid gland by several hundred per cent within a few seconds. It, however, requires nearly twenty-four hours to begin its active physiological work. Thyroxin can affect very decidedly the rate of metabolic increase to meet the demands of the economy.

While goiter can occur anywhere, even in mid-ocean, it is generally speaking rarer on the sea coast where iodine is obtainable and higher in all mountainous regions of practically every country where the iodine content is negligible. It is especially low around the littoral of the Great Lakes, the so-called "goiter belt." Such areas correspond to the situations of the earthy deposits of the last glacial period. While half a hundred theories have been evolved as to the causation of goiter, it is very generally believed to be an iodine deficiency. Most animals, including fish, poultry, and cattle, are subject to goiter. Enlargements of the thyroid can be caused by diseases due to bacterial causes, such as syphilis,

pulmonary tuberculosis, diphtheria, pneumonia, and certain of the exanthemata. We have seen acute hyperthyroidism occur in a woman very shortly after removal of a simple adenoma, who had an acute hyperthyroidism grafted on her remaining healthy gland as a result of contracting measles from her children on her return from the hospital.

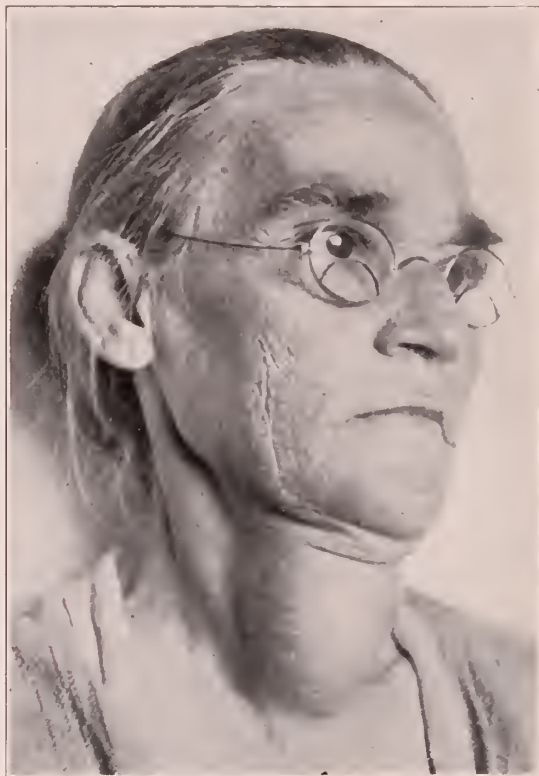
Ordinarily the absence or paucity of iodine causes an over-activity on the part of the gland to handle what meager iodine it has and the resulting goiter is at first a work hypertrophy. Iodine starvation is also heightened by certain infections, by pregnancy, and at puberty. An exclusive meat diet has been known to cause it and it can be cured by sea salt. Hippocrates used the sponge ash for its iodine. Marine who has done so much productive work on the thyroid and has written so entertainingly, proved that doses of .2 gram of sodium iodide aggregating 2 grams every spring and autumn, would prevent the incidence of goiter. In general practice, Marine thinks that syrup of hydriodic acid is a very simple way of prevention in adolescence, requiring only one or two ounces twice a year, and also that the addition of 1/100th of 1 per cent of sodium or potassium iodide to ordinary table salt would be a universal prophylaxis.

In 1822 Gardiner noted that in certain individuals the administration of iodine caused "peculiar, great, and persevering anxiety, depression of spirit, emaciation, diarrhea, tremor, and nervous excitement simulating chorea." The earlier surgical writers, particularly Kocher, designated this syndrome, "iodine Basedow." It is hyperthyroidism grafted upon a simple, adenomatous goiter. This observation led to the almost entire abandonment of iodine and it should be abandoned in elderly individuals or those in whom the goiter has been of long standing. Where there are adenomata, cyst formations, hemorrhages, calcification, etc., it is especially contraindicated. So serious is the condition of toxicity excited by the injudicious use of iodine, and so common is the practice that we have sloganized it in the title of a former paper, "The Danger of Iodine as a Routine Treatment for Goiter Except as a Preparation for Operation" (Haggard and Floyd, 1928).

\*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.



In 1914 Plummer redirected attention to the striking temporary effect of iodine, particularly in the crises of exophthalmic goiter. This has led to its widespread utilization as a preparatory measure for operation. It apparently supplied the lost iodine radical on the molecule of thyroxine and probably changes the quality of the secretion.



1. Cystic Anenoma non-toxic 12 years' duration.  
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It stimulates rapid production of colloid in the alveoli which in turn presses upon the cells and flattens them and thus reduces the amount of excess secretion of the acini cells. Unfortunately this action of iodine does not persist. In fact, the thyroid cell soon becomes exhausted from this over-stimulation and clinically the patient lapses into his former condition which is often much more aggravated. More unfortunately still, the patient cannot again be quickly restored to the improvement which followed the initial administration. If iodine is administered to exophthalmic goiter patients for a long period of time it then loses the only real benefit which it possesses, namely, the initial striking improvement from its administration in the first week or ten days which is associated with a prompt lowering of the basal metabolic rate from +80 down to +25 or 30 per cent. (The average metabolic

rate in exophthalmic goiter on first examination is 56%.) The latter is a very safe rate, other things being equal, upon which to predicate the safety of an operation. The wonderful improvement as signalized by the patient's own feeling of well-being, the lessening of her anxiety and solicitude, the quieting of the nervous symptoms and tremor, the slowing of the pulse rate from 140 to 80 often in the course of ten days, all betokens that the maximum effect of iodine has been accomplished. Then if operation is undertaken at this opportune time, it will be taking the tide at the flood which will give the patient the best chance for a safe launching of a successful surgical voyage.

An additional clinical reason why iodine will not cure exophthalmic goiter, is the fact that it is not primarily of thyroid origin. It is apparently a constitutional disease as has been urged by Marine and some of the older authors as Trousseau and Charcot, and due probably to a deranged function of the visceral nervous system.

Operation in exophthalmic goiter is not an emergency operation and if undertaken in the crisis, even a ligation under local anesthesia can easily be fatal. The hyperthyroid is the most sensitive of all patients and when supercharged with toxicity is the most dangerous surgically. Operations for other conditions in an undetected hyperthyroidism which may have been misinterpreted, is hazardous and an untoward result most mortifying. Tonsils should never be removed first in the presence of hyperthyroidism. It is more dangerous than thyroidectomy. When indicated it may follow the conquest of the hyperthyroidism. Those who are extremely nervous with almost a choreic movement, are notoriously forbidding for operation.

Exophthalmic goiter produces body-wide symptoms in the viscera and musculature. The heart, brain, and nervous system are stimulated to such an increased activity by a pathologic metabolism that it is extremely important to make an early diagnosis. The internist's most frequent mistake is interpreting the symptom complex of beginning hyperthyroidism as some nervous disorder. The nervous condition is highly accentuated but it should be carefully analyzed. The cardiac syndrome of toxic adenoma is often-times not recognized as of thyrotoxic origin. Indeed it is not infrequently extremely difficult. The basal metabolic determination is dependable in the detection of hyperthyroidism. Most cases

can be diagnosed clinically. In florid cases an experienced observer can compute the metabolic rate from the clinical manifestations often with surprising accuracy. The basal rate is invaluable in weeding out the cases of so-called irritable heart with fast pulse, paroxysmal tachycardia, that sometimes mimic hyperthyroidism and if wrongly diagnosed can but result in disappointment.



2. Exophthalmic goiter 7 months' duration and lost 64 pounds. BMR + 26%. Thyroidectomy under local and gas.

The thyrocardiac is nearly always the victim of nodular adenomatous goiter of long standing with or without the use of iodine. Happily the heart symptoms will largely disappear after removal of the toxic adenoma, not always. The surgeon with modern methods of handling these bad-risk cases herein recited may regularly get by with the operation but sadly enough the cardiopath may have permanent degenerative changes that will prevent complete cure. One may confidently say, however, that if the goiter is not removed, even though it is not frankly toxic, that if the patient lives long enough, she will in all probability have a cardiac death.

The frank exophthalmic goiter will not work as great destruction of the heart muscle as will the chronic, long-standing, toxic adenoma. Wit-

ness that this type of toxic adenoma rarely has toxemia under an average of forty-five years, whereas exophthalmic goiter occurs in women on the average at 32 years of age, reaching its maximum intensity at the end of the first year, making a very clear differentiation clinically between these two major groups of thyroid toxemias. It is difficult for one to err in a full blown exophthalmic goiter. The danger lies in the slowly advancing toxic adenoma and is thus prone to cause permanent tissue damage. Plummer has proven with an overwhelming number of cases observed that toxic adenoma never recurs after removal. It requires such a long period for re-development that the patient's expectancy will not permit it. Exophthalmic goiter may recur if an inadequate amount of gland is removed. The majority of recurrences can be controlled by X-ray but a few will necessitate an additional operation.

Inasmuch as removal of a simple adenoma under local anesthesia in experienced hands is about as safe an operation as one could desire, the question may well be asked what does it profit a woman to carry around an adenoma that in 20 per cent of cases will develop toxic symptoms after a period of years? Such cases are theoretically unnecessary. It is a greater feat of conservatism to prevent the potential danger of irreparable damage to the heart muscle by removing a simple goiter early than to wait until the toxic goiter necessitates an attempt at arrest. The proper removal of an adenoma of the thyroid should result in a mortality of a fraction of one per cent only.

In exophthalmic goiter the death rate in a large series of cases has been 1.4%. We have been able to run a series of 102 cases without a death but it should be well recognized that certain conditions are extremely dangerous and should be overcome. Hyperthyroidism in children is especially dangerous. The crises are notoriously inopportune periods for operation. Acute auricular fibrillation is contraindication to operation. Excessive recent loss of weight is a danger signal. In short, any patient on the down grade should not be submitted to immediate operation. The delirious patient is an absolute contraindication. Present or recent vomiting and diarrhea are bad symptoms, especially if associated with marked dehydration and beginning acidosis. Cardiac decompensation requires patient care for its restoration.

Rest, iodine, large quantities of fluid, and the use of digitalis in the fibrillators only are the factors for safety. Iodine is such a sovereign remedy in the preparation of patients for operation that many men have discontinued digitalis, and Plummer has shown that any patient dying a medical death in spite of large doses of iodine, the death is probably due to other conditions than a pure hyperthyroidism. We have observed pa-



3. Scar of 13-year-old boy. Slight mix-edema following.

tients die during preparation as a result of acute influenza. The exophthalmic can be reclaimed more promptly than the toxic adenoma and the iodine has the best effect in Graves' disease. In fact, the toxic adenoma patient is suffering from a pure hyperthyroidism whereas the Graves' disease patient has a dysthyroidism. When in the presence of vomiting, the patient cannot retain iodine, the iodide of sodium should be administered intravenously.

Preoperative administration of iodine will accomplish in two weeks' time what it formerly required two months' time and two operations of ligation of the superior thyroid artery and pole

to accomplish. Formerly about a third to a half of the cases required preliminary ligation. Now it is so infrequent that it is rare. It, however, still has a place in selected cases and where the patient cannot be brought into a proper condition for safe operation, in a certain percentage of cases.

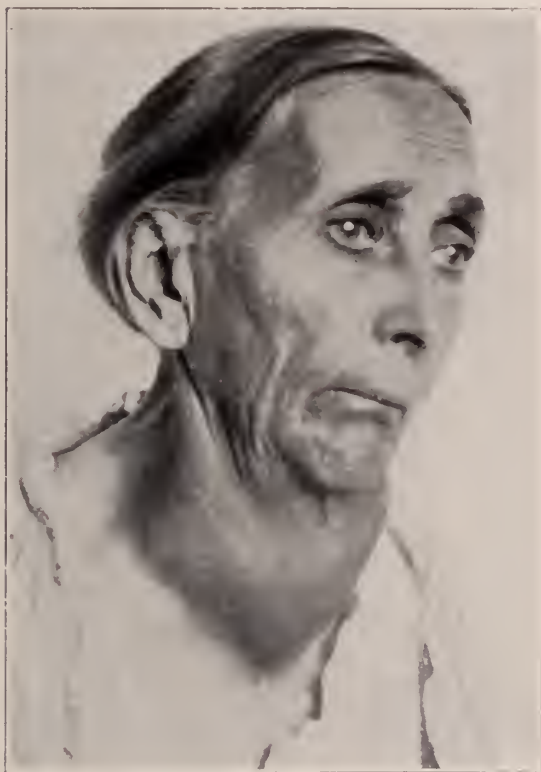
The type constituting the mechanically bad risk patient is the intrathoracic goiter. The substernal which approximates the former will occur in about 15 per cent of the cases of the nodular type. The substernal is probably a simple extension of the growth of the goiter, whereas the intrathoracic in all probability comes from that part of the thyroid tissue which is drawn down by the thymus during embryonal life. A great majority evidently are a simple extension downward of thyroid tissues, as it is along the line of least resistance of the growth. Therefore, the great majority will be seen in connection with that in the neck. Ordinarily the tumor rarely extends more than two to four inches into the thorax, although they have been known to fill the chest and extend to the diaphragm, with symptoms of great compression to the thoracic structures with cyanosis, dyspnea, dilatation of the veins of the neck and anterior chest wall, and great difficulty in swallowing, and sometimes hoarseness.

Something over half of the cases of thyroidectomy can be done under local anesthesia, certainly a very large proportion of simple adenomata and the great majority of the toxic adenomata. In exophthalmic goiter, if the patient is in a state of mental excitation and the nervous system in an unsettled condition, she does better under combined local and gas anesthesia which is also true of patients in whom the actual mechanical difficulties are rather considerable. There is no difficulty about the exposure or the closure but during the actual thyroidectomy a light gas anesthesia supplementing the local is a grateful thing.

Inasmuch as practically all of the dangers in thyroid surgery come from hemorrhage and injuries to the recurrent laryngeal nerve, the former can be prevented by careful attention to hemostasis and especially by having the patient cough before the wound is closed to make sure there is no bleeding point. The suturing over of the remaining zone of healthy gland is a safe precaution. The prevention of injury to the recurrent laryngeal consists largely in preserving a considerable zone of tissue over the bed of the nerve and the deep structures so that there is



little danger of including it in ligatures and sutures or grasping it with forceps. Special care is exercised at the inferior pole, getting entirely above the proximity of the nerve. It is a good plan too to allow the patient to talk and test the voice between each lobectomy. There local anesthesia comes in very happily and even under general the zone of the anesthesia can be so light that the patient can be awakened and requested to phonate.



4. Sarcoma of thyroid with great dyspnea. Rapid growth 6 months' duration. Removal under local. Recurrence 6 months.

Post-operatively the sheet anchor is rest, sleep from morphin, ample fluids if not by mouth by proctoclysis and subcutaneously, and iodin. A good time to give a large dose of iodin is just before the operation as it is difficult to administer an adequate amount afterward. If the patient sleeps and has plenty of fluids, there is little difficulty provided the nerve has not been impinged upon or injured, which is so prone to give rise to difficult swallowing predisposing to pneumonia. In three instances we have been obliged to do tracheotomy, once for too tight suturing, once for hemorrhage, once for nerve injury with great and increasing dyspnea. Two of the three

patients survived and the last one died of pneumonia in spite of tracheotomy, showing that prevention is much better than cure. In post-operative hyperthyroidism the ice pack with electric fan refrigeration is extremely useful—one bag for each half degree of temperature. Thyrotoxic fever was formerly the bete noire of thyroid surgery. Now it is rarely seen.

Since the advent of pre-operative iodination, it is perfectly astounding to see the remarkable betterment in the condition of the patient at the time of operation and the smoother convalescence. Post-operative tetany from injury to the parathyroid is best avoided by gently brushing back all of the structures from the shiny peritoneal lateral surface of the thyroid, taking care that the parathyroids are brushed from the capsule as it always lies external to the capsule. With this in mind and with a well-planned and well-executed thyroidectomy, injuries to the parathyroid should not occur and fortunately rarely do. The cardinal principles of adequate and complete exposure followed by efficient hemostasis with a dry wound, go far to prevent untoward accidents.

A long collar skin incision, with a median muscle division, high up and low down will enable most goiters of moderate size to be dealt with without cutting the muscles transversely, but in the case of large goiters and in any event where exposure is not entire there is no objection to cutting the ribbon muscles on one or both sides between clamps to increase the exposure. Double ligation of the superior thyroid artery is essential and care in securing primarily the lateral veins is important. In cases where hemorrhage is uncontrollable or even when it is feared, it is an easy matter by blunt dissection to expose the inferior thyroid and tie it in continuity.

The scar can be minimized by placing the incision low down and in one of the natural creases of the neck which can be easily covered by a string of beads and the suture puncture deformity of the needle can be obviated by using the metal clips that are easily removed on the fourth day without any fear of the wound reopening.

With the recently devised plan of preparation and the perfected surgical technics, the desperate exophthalmic and the neglected toxic adenoma have been taken from the high death rate list and placed among the most satisfactory major surgical endeavors.

## HYPOTHYROIDISM: LOW RESPIRATORY METABOLIC RATE—A

## PRELIMINARY REPORT\*

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About the beginning of the 19th century, Lavoisier discovered the significance of oxygen in respiration and, with the aid of Seguin, developed an apparatus by which metabolism in man could be measured fairly accurately. He thus laid the foundation for and established the essential fact in metabolism.<sup>1</sup> This essential fact is the relation between oxygen consumption and the carbon dioxide output which reveals the character of the oxidative processes going on in the organism. From that time on, comparatively little was done until Rubner,<sup>2</sup> some forty years later, elaborated on this process. In this country, we are indebted to such men as Atwater, Lusk, Benedict, Dubois, Boothby and Talbot for much of our present knowledge of correct standards and the technique of determining the respiratory metabolic rate in health and disease. Until recently there was some question as to the correctness of our present accepted standards for all sections of this country, particularly the tropics and sub-tropics. The correct basal metabolic rate for children<sup>3</sup> under 12 years of age has not been definitely settled and is still being investigated. The writer, in a recent publication,<sup>4</sup> pointed out the probable incorrectness of the present accepted standards for young people between the ages of 16 and 21, for this section of the south. Recent publications by Benedict<sup>5</sup> on previous studies of adult whites, browns and blacks in the tropics and subtropics indicate approximately conclusively that our present standards are very nearly correct. There is some evidence to indicate that the present standards on women may be too high. In the adult, climate probably is not a contributing factor; hence, when the correct standards are finally determined, it appears evident that the standards for this section of the south will be the same as those of the north.

There are at present two accepted standards for predicting the normal metabolic rate; one based on the height, weight and age relationship and the other one, the surface area. In this paper, the normals have been predicted by the surface area method. The technique used was

that which is now considered standard by most hospitals. Basal metabolic rate determinations on patients were first begun at Riverside Hospital early in 1921. The method used was that devised by John T. King, Jr.<sup>6</sup> Two years later, the Benedict-Roth apparatus, manufactured by Warren E. Collins of Boston, was installed. After using both machines for a short time, the Benedict-Roth apparatus was adopted and has since been used exclusively. The subject was admitted to the basal metabolic room after having fasted for a minimum of 12 hours. Weight and height were taken, without clothes. The temperature was taken and no test was made and recorded where there was an elevation. Care was taken to see that the subject was comfortable, both as to the bed and body temperature, for the 30 to 45 minute period prior to beginning the test. In most cases, no one was allowed in the room but it was found advisable, on rare occasions, to permit a member of the family to remain but not to converse with the subject. The general procedure was explained and the subject assured that the test was in no way disagreeable. This last has been found to be of distinct advantage. With the nervous case, a brief preliminary test is made, which is disregarded. No case was reported as satisfactory unless the technician was certain of the patient's cooperation. Practically in all cases reported tests were made and repeated one or more times by the same technician. In a number of instances, subjects were checked by another technician working in the same laboratory. The apparatus used was checked against two other machines, one of the same make and the other a Sanburn. The apparatus in use was carefully watched for the efficiency of the CO<sub>2</sub> absorbent and other sources of error. Benedict,<sup>7</sup> in a recent publication on prediction standards in normal men and women, says: "When these prerequisites are fulfilled, special procedures relating to posture or the neutral bath are unnecessary."

Due to the fact that our observations have shown that there was a larger percentage of cases with a metabolic rate of minus ten ( $-10$ ), or lower, than a review of the literature indicated, our interest in this field was stimulated. It also soon became evident that cases of hypothyroidism were being diagnosed as cases of toxic hyperthyroidism and operations advised. To be sure, a surgeon or internist of long experience with cases of disturbed metabolism would rarely make such an error.

\*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

A series of 44 cases of hypothyroidism, or with abnormally low basal metabolic rates, will be reported in this paper and an attempt made to classify these cases, giving an example of and discussing each group. Also, two cases are reported, which the author believes were hyposecretions of the supra-renal glands.

The first group in this series is classified as mild hypothyroidism, uncomplicated. Ten cases were placed in this group, showing a metabolic rate of minus 13 to minus 25. The predominating symptoms throughout this group were weakness, exhaustion on slight effort, and inability to perform an ordinary amount of work or exercise without the patients driving themselves. All of the cases in this group were moderately overweight and gained easily. Under treatment from one to three years, they became normal and in most instances remained so without further treatment. The following case is a typical example:

CASE No. 2658. Prior to the spring of 1926, she had always been in excellent health. At that time, she observed that she tired very easily and described her condition as being "peppless." She was 36 years of age; height, 5 ft. 3 in.; weight, 156 pounds (ideal weight 130-135 pounds). Her metabolic rate was minus 20. The thyroid gland was not palpable and the physical examination was essentially negative. She showed no improvement on thyroid extract up to one grain, three times a day. She was placed on thyroxin, grains 1/160th, three times a day, and in 15 days she was within normal limits. Treatment was continued until January, 1928. Metabolic tests made in May and November of 1928 showed the patient remaining normal, plus 1 and plus 6.

The second group is classified as mild hypothyroidism, with definite symptoms, in the thin and undernourished individual. These cases, of which there were 5, were almost identical in their symptoms, which were mild to severe headaches, easily exhausted, loss of weight, "run down." These cases were all underweight and were of the thin, asthenic type of individual. Their metabolic rate varied from minus 17 to minus 28. It is possible all of these cases were also cases of hypo-supra-renalism, although such diagnoses were not established to any degree of certainty, except in one case. They responded very slowly to medication. Marked nervous symptoms developed before the metabolic rate became normal. All of this group showed one or more definite foci of infection, but failed to show the expected clinical improvement when these were removed.

Exhaustive examinations were made with this group to eliminate all pulmonary pathology.

CASE No. 2384. Chief complaints: "run down," loss of weight, exhaustion. Age, 42; height, 5 ft. 8 in.; weight, 120 pounds. Consulted us in April of 1926. Had been entirely well up to three or four months previous, during which had lost 12 to 15 pounds. A severe cold, one month previous to consulting us, had materially aggravated his symptoms. Several abscessed teeth were removed and proper medication instituted. Improvement was very slow and unsatisfactory.

Third group: Low metabolic rate; general debility. Metabolic rate was from minus 23 to minus 37. Under this classification, there were three cases, although there probably would be many others, if metabolic tests were made. These cases had mild to severe non-malignant debilitating diseases. One was young and two were elderly, both of whom died.

CASE No. 9570. Age, 66; height, 5 ft. 9 in.; weight, 121 pounds. Diagnosis: amebic dysentery of long standing, secondary anemia, malnutrition. Metabolic rate was minus 30.

The fourth group is that of girls, 16 to 21 years of age, with a low metabolic rate. Only three cases of this type are reported in this series. These three cases showed minus 19, minus 24 and minus 25. Quite a large number of girls of this age, showing a low metabolic rate, have been studied, in which the question of their being true hypothyroid cases has been considered. These thyroid cases showed a rate of minus 10 to minus 14 and minus 15. It is probable, though not conclusive, that the normal rate in warm climates for young people during this period is considerably lower than now generally accepted; hence, these cases were not suitable for reporting in this series. Symptoms of this group were very similar to those found in the usual mild hypothyroid cases, those of general run down feeling and loss of energy.

CASE No. 2686. School girl; age 19 years; height, 5 ft. 5 in.; weight, 133 pounds. Metabolic rate was minus 20. She was a high school graduate. At the time of consultation, December 23, 1926, was doing her first semester in college. Chief complaints were general run down feeling, no energy, poor appetite, not sleeping well. She had done good work in high school, but since beginning college in the fall had developed the above symptoms and had been told she would not be able to do her college work. She



was placed on treatment and improved; was kept out of college until the following fall, at which time she returned and did satisfactory work.

Because two of the three cases in this group were in college, giving similar symptoms, and improved on treatment, it does not follow that all young people of this age who do poor work in college are necessarily hypothyroid cases, but where the chain of symptoms is such as these, the case should be studied for this condition before being dismissed from college for inability to do the required work.

The fifth group is hypothyroidism, with nervous symptoms closely resembling hyperthyroidism. There were 5 cases in this group. Their metabolic rate was from minus 17 to minus 30. Their chief symptoms were extreme nervousness, marked anxiety, no appreciable change in weight, and rapid heart action, which was not controlled by digitalis.

CASE No. 6895. She was in better health up to six weeks before consulting us than she had been in years. First symptoms noticed were difficult breathing and aching, left side, under axilla. Had fainted four weeks previously, at which time a physician was called who placed her in bed on digitalis. Her condition became worse. She became more nervous, weaker, and her breathing became more difficult, necessitating sitting up in bed. She also had aches over her entire body with some edema of the feet and ankles; also some cyanosis. When we were first consulted, she was bordering on hysteria and was immediately placed in the hospital (June 6, 1928). Age, 42 years; height, 5 ft. 3 in.; weight, 115½ pounds; metabolic rate was minus 28; blood pressure was 96 systolic; 80 diastolic. Except for the low blood pressure, cardiac examination was essentially negative. She was placed on thyroxin, grains 1/160th, three times a day; no other medication. In three days, her systolic blood pressure was 112, diastolic 88. A few days later, her blood pressure was 110 systolic, 80 diastolic, and her weight was 117½ pounds; edema had disappeared; breathing became normal and her symptoms disappeared entirely. On November 6th, her blood pressure was 124 systolic, 86 diastolic. She has remained well.

The sixth group is hypothyroidism, with pains and aches. There were 7 cases in this group, whose metabolic rate was from minus 16 to minus 26, all but one case being minus 20, or less. The chief symptoms in each case were general pain and aches, varying from a neuritis (self-diag-

nosed), or general backache, to aches in all the joints, closely resembling those observed in a polyarthritis. The improvement in this group of cases, under medication, was most marked. After being placed on treatment and relieved, these patients soon learn to gauge their dosage, to leave off their medication and resume it again when indicated by their symptoms.

CASE No. 11031. Age, 48 years; height, 5 ft. 6 in.; weight, 149½ pounds. Basal metabolic rate was minus 20. Several X-rays of bones and joints showed a mild osteoarthritis. Symptoms were so acute that patient contemplated giving up an especially good position. Careful neurological examination and spinal puncture were done, suspecting the condition might be a mental one. Patient was promptly relieved on medication and returns only with the reoccurrence of symptoms.

Seventh group: Myxedema. Of this group, there are but three. The metabolic rates ranged from minus 30 to minus 34. In each instance, the condition had existed for some time previous to coming to the hospital. None of these patients, nor their doctors, suspected their condition prior to the time the diagnosis was made. One case, that of a man, came because of his looks; another came as a result of menorrhagia. The symptoms of myxedema and the classical appearance of these patients are so well known that further comment is unnecessary.

The eighth group is the typical hypothyroid group of middle life. Four cases in this group presented most typical symptoms, now recognized as those presented by the hypothyroid patient of middle life. The symptoms were quite similar: slightly overweight, with mild anxiety neuroses. These cases showed a metabolic rate of minus 17 to minus 34. There was possibly some relation here to the climacteric.

CASE No. 7684½. Age, 41 years; height, 5 ft. 3 in.; weight, 133½ pounds; metabolic rate was minus 33. For several years, she had had digestive disturbances, then backache, a period of improvement, followed by another cycle of physical disturbances along with worry over getting too fat. Metabolic tests and medication have been given her at intervals for over three years.

The ninth group is that of children, 12 years of age, or under, who are overweight. There are four of these with ages 10, 11, 11 and 12; all boys. These cases were sexually under-developed, with undescended testes. They were brought for examination because of their excessive weight. They are not to be confused with

cretinism, as 3 of the 4 cases were above the average in their school work. The fourth was average. All were quite active physically and presented normal behaviorism in their relation to other children. They improved but slowly on medication, improving gradually as they grew older. It is doubtful whether medication was of value and whether or not the same improvement would have taken place without the medication. In this group, heredity seemed to be a factor.

CASE No. 3389. Age, 12 years; metabolic rate was minus 20; height 5 ft. 2 in.; weight, 140 pounds. Chief complaints: overweight and undescended testes, which had alarmed the father. Under treatment, the metabolic rate became normal, with no further gain in weight. However, the sexual development was slow.

Two cases have been examined, one of which already has been included in this series (under the group headed: Mild hypothyroidism, with definite symptoms, in the thin and undernourished individual). The symptoms in both of these cases were identical; the blood pressure was low in each case. Patients were approximately the same weight and height. The case already included showed a metabolic rate of minus 17, the other showed an absolutely normal metabolic rate. These cases gave what is supposed to be a positive reaction for supra-renal deficiency. While comparatively little has been established with regard to the deficiency of the secretion in these glands, it is fairly evident that a hypothyroid condition is not necessarily a part of the syndrome. Further studies must be done along this line before any reliable conclusion can be drawn.

#### CONCLUSIONS

(1) A preliminary report on the observations of 44 cases of hypothyroid conditions and low metabolic rates is made. These cases are classified according to their clinical symptoms.

(2) It is the belief of the writer that there are more cases of hypothyroid conditions than have heretofore been suspected.

(3) That in most instances, under proper medication, some relief may be expected.

(4) Further studies on hypothyroidism will be necessary before final reliable conclusions can be drawn.

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#### DISCUSSION

*Dr. A. L. Walters, Miami Beach:*

It is always a pleasure to listen to Dr. Cason present a paper for two reasons: First, you can hear what he says; and second, what he says shows original thought. In a previous paper one year go, I gathered he thought the climatic conditions of the tropics had a great deal to do with the basal metabolic rate being low. I gather from his paper today that this is not the case. We do know that low blood pressure frequently accompanies a low metabolic rate, although they do not necessarily parallel each other. We have heard many times, and most of us think, that low blood pressures are more prevalent in the south than in the north. I certainly have that impression, but I do not have statistics to prove it. It is not the mere fact of living in the south, however, that causes it. I recall in the last month a man came down from the north with a blood pressure of 205 sys. I saw him ten days after his arrival in Florida, in my office, and his blood pressure was 154. One week later, 135, and one week later, 125. In other words, the blood pressure had dropped from 205 to 125 with no treatment whatsoever. He simply got away from business cares (he was a pretty busy man with a great deal of responsibility), came down here, relaxed, took sun baths, and his blood pressure dropped to that extent.

Dr. Cason reports 44 cases with low metabolic rates. It would be also interesting to know the total number of cases on which he has taken the basal metabolism in the past six or seven years during which time he made these investigations—how many normal, how many above normal as well as the 44 below normal.

Dr. Flipse last year reported a series of cases of asthenia of which a large number had low basal metabolic rates. I would like to ask Dr. Flipse to say something on this subject today.

Hypothyroidism, as Dr. Cason says, is either hereditary or acquired. "The potentialities of the individual are hereditary, but the realities of the individual are conditional," that is, conditional on circumstances such as environment, infection, stress, strain, diet and general mode of living. I doubt whether all of the cases included in Dr. Cason's classification would be classed as hypothyroidism, but they are true enough low basal metabolic rate cases. As he mentioned, some were probably hypoadrenalism, while others may have been due to undernutrition itself, or infection or disease of some organ other than the thyroid.

In regard to treatment: These cases which do not improve after the administration of thyroid, whether the metabolic rate is raised or not, should be investigated from other angles. Most of them improve when prescribed thyroid extract, if you specify the brand to be used; because of the different standards of the several preparations on the market, some being only one-fifth as strong as the U. S. P. standard. After the ordinary doses of thyroid, one, two or three grains given a patient, it requires anywhere from ten days to two weeks before there is much effect. The more recent method is to give large doses, 15, 20, 30 gr., as an initial dose, just as in digitalis, and then lower this and give more gradual doses over a long period of time.

Dr. Cason classifies these cases into nine groups. When I left medical college, a hypothyroid case was a flaccid individual with a lack of perspiration, thick skin and low mentality. Today we look for a low metabolic rate, and then, particularly in those cases with a low blood pressure, we seek the symptoms such as bodily fatigue and nervous irritability.

Dr. Cason's classification should help us in the diagnosis of these cases, and I certainly enjoyed his paper.

*Dr. M. Jay Flipsc, Miami:*

Dr. Walters has mentioned my name as having been interested in hypothyroidism. At the Florida East Coast Medical Society in 1927, I read a paper on this subject which was published in the September, 1928, issue of the Florida Medical Journal. Possibly Dr. Cason has not seen this article. In it one of the questions that Dr. Walters asked in regard to percentages was answered. We reported in a series of cases seen in 18 months 228 patients, of whom 46% had a metabolic rate of less than minus 10; a very high percentage of hypothyroids.

There is one type of case that Dr. Cason did not mention, which I believe should be considered in the same group. These patients complain of shortness of breath or inability to get enough breath, breathing slowly with an occasional deep sigh. This is followed by a period of very shallow respiration, followed presently by another deep sigh. The symptoms prevent these patients from sleeping at night, are more pronounced when lying on the back in bed. It is as definite an indication of spring in the south as the robin is an indication of spring in the north. It accompanies the onset of continuous warm weather. Why climate should produce this syndrome, I don't understand. Nevertheless these patients will come in each year at about the same time, complaining of the same symptoms.

Dr. C. A. Mills, in the September, 1928, issue of Archives of Internal Medicine, described the symptom complex of diarrhea associated with asthenia and relieved by adrenalin by mouth. He had several cases of diarrhea in his series, each seen originally for subthyroid difficulties. He provided the suprarenal substance in the form of adrenalin by mouth. Adrenalin by mouth works well in diarrhea of this type, but does not seem to give relief in asthenics who have no diarrhea. Many of our subthyroid cases showed spasticity of large bowel on fluoroscopic examination. Dr. Mills also reports relief by adrenalin in cases with bloody diarrhea and persistently severe symptoms. However, all gastrointestinal cases with mucous colitis are not indications of an endocrine imbalance.

In regard to pain in the left breast or in the axilla: It is a fairly constant symptom and is an indication of asthenia and not true angina. We find this symptom chiefly in the slender individual with a rapid heart, and many of these patients are definitely subthyroid. They do not, however, tolerate thyroid as a medication but with suprarenal substance they frequently show improvement.

Suprarenal substances give excellent relief in many subthyroid asthenic cases. We now have a suprarenal preparation which is enteric coated and seems to act with more uniformity than the uncoated.

#### CONCLUSION

*Dr. T. Z. Cason, Jacksonville:*

After the age of twenty or twenty-five, one normally begins to accumulate fat. This accumulation of subcutaneous fat probably has the effect of lessening metabolism. This compen-



sates for the lowered metabolism in a hot climate and explains why the basal metabolic rate of the adult in the cold and hot climates is probably the same. The low metabolic rate in the tall asthenic individual is another problem.

We probably see proportionately more hypothyroid cases in the south than in the north. Therefore, careful observation should be made and accurate records kept in order that the facts may be established. This series was selected from 736 patients on whom 1075 metabolisms were done.

### CHRONIC ENDOCERVICITIS\*

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One has only to scan the daily papers or to visit a drug store to see the numerous patent medicines purported to cure female troubles to appreciate the number of women suffering from chronic endocervicitis, either directly or indirectly. One of the main reasons why women fall prey to quacks and furnish a lucrative field for the sale of these fake cures is because the medical profession has failed in their treatment or recognition of the trouble.

Until recent years, since Sturmdorf and other workers have published their results, the physicians' attention was focused on the uterus proper as the offending organ in nearly all chronic leucorrhoeas, backaches and numerous other complaints which were attributed to it.

Since the advent of focal infection being the cause of toxemias and constitutional disorders, the primary seat has been sought in the teeth, tonsils, accessory sinuses, gall bladder and appendix, but the cervix has been largely overlooked. The cervix has been aptly termed the "tonsil" of the pelvis; then may we not call systemic manifestations from a diseased cervix toxic, the same as those from teeth and tonsils. The so-called neurotic women are often victims of insidious sepsis and toxicosis from an infected cervix.

It is not within the scope of this paper to discuss in detail the cervix as a seat of focal infection, but only to call attention to some of the fundamental facts concerning chronic endocervicitis of intrinsic origin. Tuberculosis and syphilis are purposely left out because they are part of the general disease and rare. To fully un-

derstand chronic endocervicitis we must know something of the anatomy, histology and physiology of the organ.

Embryologically, the cervix is developed from the second portion of the Mullerian ducts, joining the uterus, which comes from the first portion, at the internal os. The cervical canal is lined with columnar epithelium which gradually shades off at the external os into squamous epithelium which covers the vaginal or external surface of the cervix. The glands of the mucosa are of the compound racemose type and are deeply seated in the tissues of cervix. These glands serve only to secrete mucous and do not participate in menstruation, while the uterine glands are of the tubular type and do have a function in menstruation. The blood supply of the cervix comes mainly from the uterine arteries. The lymphatics of cervix and uterus arise in the mucosa, pass directly into the musculature of the bodies and branch to surround every muscle bundle and pass to the subperitoneal space where they follow two main channels via the uterine and ovarian vessels at the base and top of the broad ligaments, thence to the pelvic lymph nodes. It is this lymph current that determines the course of an infection from the cervical mucosa, viz: along the inter-muscular planes of the uterine and tubal walls, through the broad ligament, and around the ovaries connecting with the lymphatics from other adnexal tissues as an ascending lymphangitis.

The function of the cervix is passive. The canal serving as a passage from vagina to uterus, while the internal os acts as a barrier to most pathogenic bacteria, except the gonococcus.

The etiology of the disease is bacterial infection. Undoubtedly a majority of the cases are due to the gonococcus, but streptococci, staphylococci and colon bacilli are often the offending organisms. The predisposing causes, aside from the specific infections, are trauma from child birth, instrumentation or careless use of douche nozzles. Those cases of virginal endocervicitis, where specific infection can be ruled out, most probably follow vaginitis in infancy which may have been very mild and has lain dormant until the age of puberty, when it becomes active again.

The pathological process is for the most part typical, varying only in intensity according to the amount of involvement. In the nullipara one sees on inspection the conical cervix showing the red edematous halo encircling a small os ex-

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truding a tenacious clump of mucous, while in the multipara there is usually laceration with hypertrophied lips containing many Nabothian cysts under a red granular surface that bleeds easily at the slightest touch. Histologically, there is more or less dense round cell infiltration in and around the glands, which are often dilated with hypertrophy of the lining and distortion of their structure. In advanced cases, there is hyperplasia of the columnar cells of the mucosa pushing out onto the vaginal surfaces forming the so-called erosion. Culbertson has given a vivid picture of the maceration of squamous epithelium, the over-growth of mucous cells; the occlusion of the glands with cystic or abscess formation, and the metaplasia which is often mistaken for carcinoma and which probably represents the actual beginning of malignancy.

The symptomatology is varied and often complicated by associated pathological changes in the pelvic organs. The most common symptom is a leucorrheal discharge which is usually odorless and varying from a mucoid to a bloody purulent character. The patient often complains of menstrual derangements and dyspareunia. Sterility is usually associated with severe symptoms. Backache is not so frequent, but is present in those cases having retroversion along with a metritis or parametritis secondary to the primary lesion in the cervix. Nearly all the pelvic manifestations, aside from salpingitis, such as menstrual disorders, backache, nervousness and headache at time of menstruation, pain in sides, and tired feeling are due to a lymphangitis of uterus, tubes, ovaries, broad ligaments and uterosacral ligaments.

The diagnosis rarely presents difficulties as the gross picture of the cervix with leucorrheal discharge is almost pathognomonic of the disease. We have only to rule out syphilis, tuberculosis and malignant disease. The first two can usually be ruled out by history and being associated with the general disease. Malignancy, if suspected, can be determined by biopsy. Smears should be made and cultures, if necessary, to try to identify the infecting organism, but only too often smears are of little value, due to the many saprophytic secondary invaders.

The cervix, as source of systemic infection, is shown by the observations and investigations of Rosenow, Moench, Sturmdorf and Long-

stroth. Rosenow called attention to cervix as a focus of infection. Moench reproduced arthritis experimentally in animals by inoculations with serum from cervical discharges of patients suffering both with endocervicitis and arthritis. She, also, reports cases in which radical treatment of cervicitis cleared up chronic arthritic conditions. Longstroth reported a series of fifty cases with nervous and mental manifestations in whom other foci had been definitely ruled out, who were either relieved or cured by eradication of a diseased cervix. These investigations, as well as the histology and lymphatic drainage, would warrant the consideration of the cervix as a focus of infection.

Treatment: Keeping in mind the pathogenic bacteria, the anatomy, histology, pathology, and lymphatic drainage of the cervix and its faculty of harboring bacteria over long periods of time, one can not help but believe that local superficial treatments are useless, except as temporary palliative measures. Any method of treatment must be directed toward the correction or eradication of the pathological process. To accomplish this end, I know of only two ways, viz: cauterization with destruction of the infected glands or their removal surgically. I will not discuss these methods in detail, but will say that linear cauterization 1/8 inch apart entirely around cervix or Sturmdorf amputation has given the best results in my hands.

I hope this paper may in some measure be a stimulus for a better understanding and more scientific treatment of chronic endocervicitis.

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#### DISCUSSION

*Dr. J. W. Snyder, Miami:*

Dr. Day has presented such an admirable paper on a subject so broad in scope that one hardly knows where to begin the discussion. As the subject of focal infection itself is still a matter for controversy, we should, I believe, be a bit cautious in generalization regarding the sys-

temic effects of endocervicitis. At least, we should not place the blame of all female complaints or pelvic manifestations at the door of cervical inflammation. Clinical experience up to the present has not been very convincing as far as the cure of articular or muscular pains and neuritis by the eradication of cervical infection.

In some cases definite results have been obtained, but more often failure results, and it must not be forgotten that in addition to eradicating the cervical focus other foci are also commonly removed so that the exact amount of benefit derived from clearing up the cervix is often in doubt. My chief thought in this matter is that while we should recognize the cervix as a possible focus of infection we should be guarded in our prognosis as to benefits to be expected from cervical therapy. I quite agree with Dr. Day that cervical cauterization and the Sturmdorf operation are the best means we have for treating chronic endocervicitis, but we must emphasize the fact that these measures only apply to chronic endocervicitis, not to the acute or sub-acute stage. Moreover, in chronic gonococcal endocervicitis, neither measures should be employed as long as the gonococcus is present or evidence of active pelvic inflammation remain.

Radical cervical cauterization in which the cervical canal itself is attacked occasionally results in a subsequent stenosis which may require dilatations or some form of plastic. This possible effect should be considered if the woman is in the child-bearing period.

Office cauterization of the cervix without a general anesthetic will readily remove a cervical erosion, but deeper cauterization into the cervical canal is difficult, and while the vaginal surface of the cervix may look normal, a profuse discharge may continue from the cervical canal itself.

Mortzloff states that cauterization is effective in about 65% of cases. The Sturmdorf operation has the advantage of a more effectual removal of the glandular portion of the cervix, but it also presents the possibility of subsequent cervical stenosis. The percentage of cure from the Sturmdorf operation is probably somewhat greater than can be expected from cauterization.

*Dr. G. F. Octjen, Jacksonville:*

Chronic endocervicitis is one of the most common gynecological conditions. The fact that chronic endocervicitis is seldom painful might

be in a large measure the reason why this condition is so often overlooked. Although it is very common, it is frequently ignored or mistreated. The structure of the cervix uteri is peculiarly such as to predispose it to infection. The internal os of the cervix represents a sharp line of demarcation both physiologically and pathologically. Infections that occur in the cervical mucosa do not spread to the endometrium or mucous lining of the body of the uterus by continuity, as one so often hears, but rather as Dr. Day brought out by travel of the lymphatics spreading up through the body of the uterus and out into the broad ligaments, tubes and ovaries. It is from this pathological fact that one can readily see how illogical it would be to treat a cervix with local applications. The valuable time that is lost here might result in a salpingectomy later on which could have been averted if the proper treatment had been instituted in the beginning—that is, treatment of the infected cervical mucosa. The fact that the cervix is a most common site of malignancy in the female should demand careful study in all patients who are suspected of having a diseased cervix. Inasmuch as the rational treatment of any focus of infection is to get rid of that infection, I think it is commonly agreed that the Sturmdorf operation with complete enucleation of the infected, deep-seated cervical glands, or a thorough cauterization such as Dr. Day has brought out, would be the proper treatment.

*Dr. T. S. Field, Jacksonville:*

There is no question about the fact that almost every woman who has had a child has endocervicitis, because no child can come through the cervix without lacerating the cervical mucosa to some extent. And whenever the cervical mucosa is lacerated there is always present in the vagina infective bacteria which immediately seize this opening for entrance.

Arthur Curtis, other than whom no man in the United States of America or probably the world knows more about infection of the cervix, has stated that the best treatment for chronic endocervicitis is radium. I must frankly confess that I have had no experience whatever with radium. I have referred some cases to Dr. Holden for radium treatment, but have not heard his expression upon the results. Personally, I am absolutely positive that I have secured as good results with cauterization of the cervix as



I have with the Sturindorf amputation. I must say that my rule in deciding whether they shall have cauterization or amputation depends upon the extent of laceration of the cervix. I have had only one case in my experience in which an amputation of the cervix resulted in the cure of an arthritis. However, I am firmly convinced that the cervix may constitute the focus of infection for a systemic disease. But, what do we know about the so-called precancerous lesions? I believe that Cohnheim's rest cells hypothesis is the best hypothesis for the cause of cancer of the cervix. It claims that the cell rests in a position which is constantly irritated by infections. And we are accustomed to say that the patient with a chronic endocervicitis has a precancerous lesion.

As far as I personally know, most patients who have chronic endocervicitis complain more of the discharge than they do of any other symptom, and usually that is the cause for our treatment. And in my hands cauterization of the cervix is done generally satisfactorily with the exception of those cases in which the cauterization has been too thorough, resulting in a stenosis of the cervix. I have at present one case in which I did a thorough cauterization of the cervix and the patient has a stenosis which I am now dilating in the office, but she still has the discharge, which is proof positive to me that I have not reached the deep-seated glands in the cervix. I have tried office cauterization, and I tell you frankly that I have found it absolutely valueless except after a long period of time, and it is so painful in the ordinary individual that she will not stand for long continued treatment. Ordinarily, I may say, that the hospital cauterization using the actual electro-cautery, done in a stellate manner and very thoroughly, is very satisfactory. It is especially satisfactory in those cases in which the leucorrhea is the cause of sterility. And I may say here that most of the cauterizations of the cervix that I do are done for sterility, and the results are generally satisfactory. It is unfortunately true that endocervicitis causes an acid vaginal secretion which for the most part is harmful to the life of the spermatozoon. Therefore, if the husband, after thorough study, is found to have live spermatozoa, and there is no history of tubular occlusion, a cauterization of the cervix plus an alkaline douche will frequently give you very satisfactory results.

*Dr. David R. Kennedy, Sarasota:*

I make no apology for prolonging the discussion of this subject as I consider it one of the most important items on the program. More of us country Doctors appreciate this than the specialists do.

In the last four years I don't believe that there have been six women whom I have examined on whom I have not done both a manual pelvic examination, and examination with the speculum, and I am very much struck with the occurrence of endocervicitis. The most common cause of this condition, other than cancer, in my opinion, is improper delivery at childbirth. One reason is the improper use of pituitrin so that the doctor can get home quicker. And another is to put your hand in and dilate the cervix manually instead of waiting for nature to do it as it should be done, helping the cervix to get over the head and around the child's neck, thereby getting the baby out about a half hour sooner. Another thing is the failure to see this woman in your office at the end of three weeks and three months after delivery to be sure that all inflammation around this area which may have been torn has been repaired. If we deliver our women properly at least 75% of the cases of endocervicitis will not appear.

Another important thing to stress: In doing a hysterectomy it is a good idea to do a complete hysterectomy, where there is any doubt as to cervix involvement. In a large number of cases where the cervix is left in you have to go back later and do a cauterization, although it may look healthy at the time.

#### CONCLUSION

*Dr. H. A. Day, Orlando:*

I am indeed grateful for your generous discussion of my paper. I believe that this is a very important subject and I would have gone into the treatment more thoroughly, but I feel that treatment of the cervix should be given in a paper limited to that subject alone, as it would otherwise be too long.

It seems to me from the discussion that endocervicitis is now attracting the attention of physicians who give their patients a thorough physical examination more than it ever has before. I wish to thank you all again for your kind indulgence.

## INTRAUTERINE INJECTION OF LIPIODOL AS A DIAGNOSTIC AID IN GYNECOLOGY\*

WILLIAM M. ROWLETT, M.D., F.A.C.S.,  
Tampa.

In determining tubal patency, or diagnosing uterine and tubal pathology, the lipiodol roentgenogram furnishes the clinician with a permanent clinical record that has no equal. These roentgenograms likewise will aid materially in deciding the question of when and when not to operate and what surgical relief is to be expected. This is especially true in those cases of functional disturbances of the female and sexual organs and where the pathological changes in the uterus and tubes cannot be determined by manual or bimanual palpation.

While Rubin and others have been, for some time, using collargol solution and other opaque media for the demonstration of patent and non-patent fallopian tubes, the after-effects from pelvic irritation were too great to justify their continual use. With lipiodol we are getting just as good, if not better, roentgenograms and with practically no pelvic irritation or discomfort. With so simple a technique, and with a minimum amount of danger, I believe this method as a diagnostic means is justified, and in cases of sterility, where possible to carry out the technique, should be employed as a routine measure to establish definitely tubal patency in order to eliminate the tubes as a cause for the existing sterility. However, I feel that tubal insufflation, injections, treatment, or subjecting the wife to any operative procedure with a view of correcting the sterility, without first examining the husband in order to determine whether or not he is fertile, should, in these days of enlightenment, be regarded as malpractice.

Statistics show that semen defects in the male account for about one-third of the barren unions. Under proper treatment, one-fourth of these defective males stand a chance of recovering their verility. I find that there exists a great timidity among men in getting their cooperation in locating the cause, and it is unfortunate that they possess this false pride.

It has been estimated, when the cause of the sterility is attributed to the occluded tubes, that at least one-third of them, under proper and persistent treatment, have a good chance to be cured.

Lipiodol is a chemical compound consisting of 40% iodine suspended in poppy seed oil—it is non-caustic and non-toxic. The indications for its uses are the same as those for gas, oxygen and air insufflation. Its superiority over Rubin's insufflation method lies in the fact that it not only shows the patency of the tubes but also reveals existing pathology, as well as determining the point of occlusion. The contra-indications for its uses are also those governing the Rubin test, such as uterine hemorrhage or an acute infection. All patients should first have blood and urine examinations made, a carefully taken history, and a thorough examination in order to detect other possible pathology or foci of infections.

Just previous to preparing for the test, the patient is instructed to take a soap-suds enema. When ready, she is placed on the table in the lithotomy position. A special medium-sized Graves speculum is carefully inserted, at the same time, in order to get complete relaxation, assuring the patient that the procedure will not be painful. The cervical canal is cleansed with tincture of iodine. The anterior lip of the cervix is then caught with a small single-tooth tenaculum in order to hold it steady.

A modified Keyes-Ultzman cannular with a metal collar fastened so as to prevent the back sliding of the small rubber stopper, is then inserted into the cervical canal, and when once in place, is held there by a spring fastened to the lower jaw of the speculum. An ordinary Luer syringe with 10 c.c. of lipiodol, all air having been excluded, is then connected with the cannular, and with gentle pressure of the syringe's plunger the iodized oil is forced in. If the patient complains of pain in the region of the tubes, the pressure is released until the pain disappears, and then again applied. The recurrence of the pain, caused by the distention of the tubes, may necessitate several pauses before the desired amount of lipiodol is injected and the roentgenogram is taken, after which the instruments are removed.

The patient is instructed to return in twenty-four hours for a second, or check-up picture to determine whether or not the lipiodol had escaped, through a supposed obstructed tube, into the pelvic cavity through a slower process than the first picture showed. It will also give an idea as to the rapidity in which the tubes and uterus expel the iodized oil.

\*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.

Of sixty-seven cases of tubal insufflation and iodized oil injections since 1925, I am pleased to be able to report no unpleasant complications following the test. Of this number, forty-nine came solely for the purpose of consulting me relative to their sterility. The other eighteen were bothered with some abnormality of their genital organs. Of the forty-nine cases of sterility, seven have since conceived and given birth to healthy babies, two of the number having been confined twice. Two more of this series whose sterility had been attributed by their physician to malposition of the uterus, had had laparotomies performed with the hope of remedying the cause. Lipiodol injections later showed both tubes of the first patient patent, while only the right tube of the second patient was patent, the left tube being entirely obliterated. However, the surgeon who performed the laparotomy has since assured me that the tube was not molested. While both of these same women ridiculed the idea that their apparently healthy husbands were faulty, nevertheless, examinations of specimens of semen revealed that they were sterile. Only one gave a history of ever having had a venereal disease, namely—gonorrhea.

Those patients whose roentgenograms I have here submitted to you gave the following histories:

*Case No. 1.*—Mrs. M., age 41, healthy appearance. Both she and her husband had been previously married, each having had a baby by their former mate. Last marriage six years ago, and very desirous for another baby. Menstruation began at fourteen, always regular—q. 28. d. and painless—Wassermann negative, uterus slightly retroverted, freely movable, examination elicits no pain, cervix healthy, slight discharge with alkaline reaction. Air insufflation shows tubes patent at 100 m.m. of pressure. Ten c.c. lipiodol injection show extensive uterine and tubal filling with the lipiodol escaping into the pelvic cavity.

*Case No. 2.*—Mrs. B., age thirty-two, married ten years, general appearance, healthy, menstruation began at thirteen, regular up to four years ago, now suffers from both dysmenorrhea and metrorrhagia. Has two healthy children aged eight and six. Wasserman negative. Present complaint—irregular menstruation, abdominal soreness and backache, cervix large and ulcerated, uterus normal size, but sensitive upon manipulation—is in a fixed position. Left ovary enlarged and painful to touch. Roentgenograms

show both isthmus and ampulla of the tubes distended above normal and apparently constricted in the middle. The lipiodol has escaped into the pelvic cavity and come in contact with the left ovary, showing same up as enlarged. Diagnosis—bilateral hydrosalpinx, left cystic ovary, adhesions.

*Case No. 3.*—Mrs. M., age thirty-one, married twelve years; general appearance healthy; menstruation began at fourteen, always regular and painless, duration four days. Gave birth ten and eight years ago to healthy babies—babies living and healthy. Present complaint—sterility. Uterus normal size and freely movable, slightly anti-flexed. Wasserman negative. Lipiodol shows the tubes to be non-patent at high pressure. The isthmus and ampulla are apparently normal, with the fimbriated ends clubbed and sealed. Check-up shows no lipiodol in the pelvic cavity.

*Case No. 4.*—Mrs. W., age thirty. Married six years, general appearance healthy. Primary sterility. Menstruation began at fourteen, regular, no pain. Wasserman negative. Uterus normal size, anti-flexed. Had a laparotomy performed eighteen months ago to correct position and sterility—no masses detected. Air passes easily at 140 m.m. pressure. Lipiodol injection shows right tube patent with no evidence of a left tube. The follow-up picture, the following day, showed much lipiodol in the pelvic cavity.

*Case No. 5.*—Mrs. H., age twenty-nine, rather frail appearance, married ten years. Gave birth to seven months' baby, eight years ago. Baby living and healthy. Menstruation began at fourteen, regular and painless. Wasserman negative. Uterus normal position, freely movable, cervix slightly eroded. Alkaline reaction. Tubes patent at 160 m.m. pressure. Ten c.c. of lipiodol under pressure produced extensive uterine and tubal filling, showing tubes kinked and clubbed. No lipiodol is seen in the pelvic cavity except a few drops at the beginning of the isthmus of right tube which may be caused by an old fistular tract or rupture of undue pressure from the lipiodol. Patient reports no unpleasant after-effects.

#### CONCLUSIONS

I. This simple method of examining the female pelvic organs yields very valuable information and, under proper precaution, is without danger.



II. In sterility, pathology of the tubes or before a curettage, the lipiodol roentgenograms can be of valuable assistance.

III. The roentgenograms as a part of your patient's history has no equal.

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# DISCUSSION

*Dr. Franklyn Thorpe, Tampa:*

I first began using uterine insufflation seven years ago as worked out by Rubin. At first air was used, then carbon dioxide gas, then oxygen, then nitrogen gas, and finally various combinations of gasses. Little more was expected of the procedure other than a diagnosis of tubal patency or occlusion. Since then the introduction of iodized oil has largely widened its diagnostic sphere of usefulness and to even offer hope of therapeutic help in some cases.

For the past two years I have been using solely the iodized oil. The advantages which this medium has over gas insufflation, in my experience, are briefly:

1. It offers a better contrast medium, giving clearer and better roentgenograms.
2. It has proven in the experience of those familiar with its use to be not only safer, but even to possess some therapeutic value as well.
3. It enables us to localize the site of occlusion and to know whether both tubes are patent

or only one, which could not be done with gas insufflation.

4. It enables us to follow the course of the iodized oil in the tubes and pelvis—5, 10, 24, 48 or 72 hours later which often yields valuable information, whereas with air and gas insufflation the media were too rapidly absorbed.

5. It is of value in the diagnosis and localization of many conditions other than tubal patency, such as: submucous and intramural uterine myomata, infantilism, malpositions, ovarian tumors, tubal pregnancy, genital fistulae, etc.

6. The technique becomes a simple office procedure instead of a hospital operation.

The questions which arose in my mind when I first learned of the use of the iodized oil were:

First—Would it be more likely to force infected material from the uterus and tubes into the pelvis than the gas insufflation method?

The answer to this question seems to be that the iodized oil was first employed for therapeutic purposes to irrigate infected sinuses and cavities, before it came to be used in connection with the X-ray for diagnostic purposes. It seems to have been used to irrigate practically every cavity in the body, including the synovial sac of the knee-joint and pericardial sac of the heart. Because of its high germicidal property and slow absorption, many gynecological clinics, both here and abroad, are now employing it therapeutically. In this connection I would like to mention an illustration which came to my attention while visiting one of the gynecological clinics in one of the larger hospitals in Boston last fall during the meeting of the American College of Surgeons. It was a case which had been sterile some five years. Hysterosalpingography showed a womb of normal size in fair position, but with club-shaped distention and occlusion of the ampullar ends of both tubes. Pictures were taken every day for six days and showed the distal ends of the tubes still distended, with no signs of any leakage into the pelvis. The patient was sent home with instructions to return in 3 months. Salpingograms taken at this time showed both tubes patent. The iodized oil could be seen freely entering the pelvis through the abdominal ostia of both tubes. Four or five months later she returned to the clinic of her own accord with the information that she had missed her menses for the past two months and was found to be pregnant. It is doubtful if gas insufflation, with its rapid absorption, would have helped this woman.

The second question which arose in my mind was: Would its presence in the pelvis cause an inflammatory reaction with possibly the formation of adhesions?

Reports of those who have had occasion to enter the belly after hysterosalpingography show not only the absence of any signs of pelvic irritation, but in fresh microscopical preparations the mucous membrane and activity of the cilia were found to be completely intact.

The third question: Would it cause iodism? I think can be answered negatively, for in a large series, observers have seen no cases. This is probably due to the slow absorption of the iodine in the mixture.

Although employment of the method for therapeutic purposes seems, according to all reports, to be cutting down the number of conditions which we formerly believed contra-indicated its use, I still do not use it in cases of infectious cervicitis, inflammatory processes of the genital tract, cancer, with its danger of spreading virulent cells, hemorrhagic conditions of the uterus, etc.

I have greatly enjoyed Dr. Rowlett's splendid paper and the very interesting series of pictures.

*Dr. T. S. Field, Jacksonville:*

I enjoyed Dr. Rowlett's paper and I was asked to discuss it. I am sorry to say that I am probably not the proper man to discuss this paper as I have not had enough experience in the use of this method. My limited experience has been due to two reasons: first, because there are very few cases that I see of sterility that demand a lipiodol injection of the tubes. Generally, there is some other cause which is perfectly apparent, and you won't unnecessarily examine a woman, having found another cause for sterility. The second reason is that I frankly admit I am afraid of lipiodol.

Now, the doctor who has just preceded me uses it as a therapeutic measure. I disagree with him quite heartily. Seventeen years ago somebody brought out the use of iodine and oil for gonorrheal endometritis, and we got a number of pus tubes from it. I think all of us know that iodine and oil is not an antiseptic because the iodine is not liberated from the oil. Therefore, it cannot possibly be a therapeutic measure. If you have an endocervicitis, and force lipiodol through the uterus into the tubes then you are

liable to carry the infection ahead and give your patient salpingitis.

I want to warn you about one thing in this connection in the use of lipiodol that has become very apparent to me. I have had four patients in the last three months in my office, coming for sterility. Of the four patients, three of them have had the Rubin test. Two of these patients have been told by doctors that they could dilate the tubes and make pregnancy possible, and the other two have had lipiodol injections. I examined the four husbands and found two absolutely without spermatozoa, one with some dead spermatozoa, and one with mostly dead and a few faintly active spermatozoa. It has been my experience that sterility, in patients without a history of a previous infection or endocervicitis, is very often due to causes that are apparent in the husband, to acid vaginal secretions, to certain reactions to the spermatozoa which can only be found out by examination of the spermatozoa in the vagina after intercourse, and by causes which I am unable to explain. In my own experience with lipiodol I have had no unfavorable results. I had a patient recently that I did a lipiodol injection on, and although I was able to see an adhesion in the left tube, the right tube was perfectly closed. The film was made by Doctors Cunningham and Shaw. The right tube was not patent at all, and the left tube I found had an adhesion which might mitigate against pregnancy. The lipiodol escaped from this tube and was present in the pelvis of this patient for six weeks after the examination. I have personally taken out the right ovary and left tube of one patient who became pregnant subsequently, so I see no reason why said patient should not at least get an ectopic pregnancy. This woman has been childless seven years; therefore, there must be some other reason. On examination of the husband there were no spermatozoa present. Now, the reason I did not examine this husband first was because he could not get around to the examination until after the wife was examined, and the wife insisted on being examined prior to the husband.

*Dr. H. E. White, St. Augustine:*

I have enjoyed Dr. Rowlett's paper very much and I just want to mention one case that I had recently in which I am sure this method aided me in making a diagnosis.

It was a patient 24 years old, who was married at 18 following which she had two normal deliveries. Her husband died and following his death she had an operation and after this operation married a second time. She was desirous of having children with her second husband and after two years had not been able to become pregnant so she came to me to find out why she could not become pregnant with her second husband.

Examination of husband showed that he was fertile.

I questioned her regarding the operation and what had been done at the time of operation. She did not know what the operation consisted of except the removal of an appendix. It was impossible to get the operative history of this patient. Bi-manual examination of the patient did not give any information so I injected her with 5 c.c. of lipiodol and found both tubes had apparently been removed.

I am quite sure this method gave me positive information which I could not have secured as satisfactorily any other way and possibly prevented the patient from having a second operation.

#### CONCLUSION

*Dr. H. M. Rozclett, Tampa:*

I wish to thank the doctors for their liberal discussion of my paper.

Regarding Dr. Field's theory of the immunity of the patient to spermatozoa—to those who are interested in this work, I would like to state that Jarcho & Vogt have recently developed a coagulation test which enables the physicians to determine the immunity of their patients to spermatozoa.

I consider it quite essential to utilize this technique if the best results are to be obtained.

#### NUTRITIONAL NEEDS TO THE THIRD YEAR\*

GRACE WHITFORD, M.D.,  
Ozona.

Brilliant work in body chemistry and physiology in the past few years gives one a positive thrill. It also lends comfort to the startling revelation that practically every child of the temperate zone, if not clinically, is shown by the Roentgen rays to be rachitic. While as yet we may not have the why of the calcium and phosphorus intake and balance proven, we have found a way of

preventing, in a measure at least, rachitis in the average child.

Nine and ten years ago, I had an opportunity to estimate the field of the pediatrician in Florida. At that time I think there was one man devoting himself to children's work exclusively and a bare dozen giving it especial attention. Today there are perhaps twenty men and women doing this work exclusively (perhaps too high an estimate), and probably a little higher proportion giving it especial attention. Most sections are dependent on the general practitioner for the care of their children. Inasmuch as a large part of the average doctor's practice comes from women and children, and the women largely influenced as to the choice of a doctor by his success with their children, it behooves the practitioner working under the competition and economic strain of today to be alert to the needs of his smallest patients. Someone has said cleverly that "the infant is still an annoying incident of obstetrical practice." This would seem true many times with the evident lack of wise supervision of both breast and bottle-fed babies. Obviously, it is impossible for the average doctor working long hours to keep up with much of the highly technical literature on child care. Perhaps, as one eminent specialist has suggested, the fault is rather that of the pediatrician than of the general practitioner that the latter does not keep himself better informed.

Grulee says: "There is no question but that the laity is demanding more definite and more extended knowledge of infant feeding than he (the average general practitioner) can supply at the present time." And again: "Is not every practitioner equipped to feed babies properly if he will use the means at his disposal and a fair amount of common sense?"

Nutritional needs are proper food, sunshine, and rest.

The main aim in nutritional supervision to the third year is an avoidance of rickets and its cure. Mother's milk, and the milk of most animals, provide the young with the main essentials, except Vitamin D. The day has passed when we give only milk to the ninth month, assuming that it is the complete food. However, "the attempt to find a food other than breast milk, the composition of which will be perfectly satisfactory for all babies of all ages, has never up to the present been fabricated and it is fair to assume that it never will." (Grulee). The expectant mother should be taught during her pregnancy that she is

\*Written by request from a talk given before the Pinellas County Medical Society, Feb. 10, 1928.



going to nurse her child and in the large majority of cases she can. The physician must be able to tide her over the early days of too little milk, too much milk, painful breasts, etc., assuring her that if her child can be breast-fed for the first three weeks, the rest of the breast-feeding period probably will be normal. If necessary, use supplementary feeding, rather than removal from the breast, as breast milk is disease protective. In fact, "parental and enteric diseases are more permanently cured by keeping the baby on the breast than by weaning it." The physician, in supplementary feeding, or in the rare cases necessitating artificial feeding, should be capable of prescribing the correct milk formula and the process of preparing it; a nurse well trained in infant feeding is invaluable at these times, starting the mother or the nurse-maid out properly. Results of cases in the Chicago Infant Welfare Stations showed that one out of every three hundred children needed a special form of feeding to fit his demands; that seven out of ten babies under six months of age can be fed wholly or in part on the breast; that cereals and vegetables can be used to advantage in feeding infants in the second six months of life; that acid milks are necessary for only one in three hundred cases of infant feeding; that it may be necessary to substitute for cane sugar some other form of sugar in less than ten per cent of artificially fed babies; that there is probably no advantage whatever in the use of proprietary infant foods, and practically no indication for their use. The sources of food used in these cases were the same as available in the average lower and upper middle class family.

Cow's milk is preferable to canned milks—evaporated or dried—and particularly to the sweetened canned milk, making fat babies and malnourished children. The doctors of a community ought to be able to regulate the reliability of the source of the milk.

In a recent study by the Dicks of powdered milk preparations, they found that "the presence of a variety of living bacteria, including streptococci, in powdered milk indicates that methods of manufacture do not destroy the bacteria in the milk and that the bacteria remain viable in the powder. The preparation of powdered milk feedings without boiling or pasteurization in order to avoid curdling allows the bacteria in the powder to persist in living form in the feeding." Powdered protein milks, powdered casein, powdered whole milk, and powdered modified milk were

used in the experiments. The use of varieties of dried milks are easy and widespread. The study made by the Dicks should cause the practitioner to hesitate in recommending dried milk preparations without precautions.

A brief outline of this sort precludes going into the various modifications and additions to the milk formulæ. There is a limited field for lactic acid milk with Karo syrup (brown), especial sugars, gelatin, etc.

Since Vitamin D, in which all milks are lacking, is essential to the proper growth of the young, existing in eggs, animal fats, liver, it must be supplied. Orange juice should be begun early. The rare cases that do not tolerate it may be fed tomato or cabbage juice. Cod liver oil should be begun early, both because the infant needs it and so that the habit may be formed before he learns to refuse or fight it. The use of egg yolk in the milk is growing and seemingly with success. I am using calves' liver in a number of cases in ages much earlier than I should have ventured three years ago.

It is common usage to add both acids and alkalis to the diet of infants. The quotations of the following conclusions published in the American Journal of the Diseases of Children should be of value:

"1. Hydrochloric acid in small amounts, 45 c.c. of a tenth-normal solution, when added to a litre of milk is followed by the appearance of casts and sometimes of red blood cells in the urine of infants. In older children, about 100 c.c. of this dilute acid is required to bring about similar irritative manifestations.

"2. When the tenth-normal hydrochloric acid is omitted from the diet, the pathologic urinary changes disappear in about forty-eight hours.

"3. When 8 gm. of calcium lactate was added to the milk, a similar result occurred.

"4. Lactic acid (U. S. P. 87 per cent), when added in quantities of 8 c.c. to a litre of milk, only occasionally produces casts in the urine.

"5. Lemon juice in a concentration of 3 per cent does not lead to any evidences of irritation.

"6. Sodium bicarbonate when given to infants and older children in large doses, 240 c.c. of a double normal solution, the equivalent of 10.1 gm. or 152 grains daily, does not have the same irritating effects on the urinary tract that acid does.

"7. Sodium hydroxide, 240 c.c. of a tenth-normal solution in quantities of 100 c.c. does not produce the urinary changes noted when the

tenth-normal hydrochloric acid is added. The result is a slightly alkaline or slightly acid urine, which may account for the lack of irritative effects.

"8. The addition of sodium hydroxide leads to the formation of the typical soapy stool.

"9. When the fat content of the diet was reduced by skimming the milk, the addition of sodium hydroxide rendered the urine markedly alkaline."

Beginning the feeding of additional foods as we do after the sixth month, with orange juice and cod liver oil earlier, there should be the necessary additions for normal development and a gradual cutting of the number of feedings through the second year until the average normal three-year-old should be eating the simpler foods of the family table. In fact, in the average family of one or no servant, it is practically a necessity that the food of the adults should be simple and well-balanced enough for the child of three in order that he may be properly fed. This presupposes the use of brains on the part of the one planning the meals in order that the child may be given the proper food for growth and the adults the proper food for their work and choice. However, it must be done, otherwise the child suffers as to normal development, or the adults become dissatisfied; both bad conditions for the child himself.

The problem of anorexia is a serious one. Neither infant nor young child should be stuffed. Anorexia may be the forerunner of infections and should be watched. It is often a behaviourism and needs careful psychological study. It should never be commented upon publicly or at the table, nor should the child be allowed to occupy the limelight because of it. Implicit obedience coupled with parental poise and control are essential in training a child to eat correctly if he deviates from the normal at all.

Emerson says sagely: "It takes the wisest diagnostic skill and supervision of health habits to see that any child gains steadily, and constantly approaches the normal weight for its stock, sex, age, and height."

As yet the preventing dietary essence of pellagra is unknown but is present, evidently in large quantities, in lean beef, mutton, pork, fish, fowl, egg yolk, powdered yeast (preferably the yeast plant dead).

In sunshine, Florida is particularly fortunate the year around. Few places, if any other in these United States, afford the number of hours

of sunshine a year, especially in winter. The short violet rays, free from clouds and smoke, are the most effective. We presuppose that the patient is given the benefit of direct contact uninhibited by clothing or filtered through glass. The antirachitic effect of skyshine is one-half to two-thirds as great as that produced by what is termed sunshine (sun's rays plus reflected rays from the sky). Especially made glass has 25 to 50% of the antirachitic effect obtained without the use of glass. The greatest effect of sunshine and skyshine are from March until early fall. Ultra-violet radiations shorter than those of sunshine are more potent in healing rickets than the effective area of solar rays (band comprising waves 290-313 millimicrons). Much has been written on irradiation of foods and cod liver oil: it is found that irradiation of a cod liver oil potent in vitamins for thirty minutes with ultraviolet rays from a quartz mercury lamp does not enhance its antirachitic potency; irradiation of two hours noticeably decreases its antirachitic activity. The deduction from experiments and tests is that even the nursing infant is not completely adjusted to living conditions in temperate zones, and that rickets is its pathological reaction when deprived of its solar irradiation which is an essential complement to its diet. The conclusion is that rickets cannot be regarded as a disorder caused by a deficiency of vitamin, since ideal food for the infant—human milk—is exceedingly poor in the antirachitic factor; and, furthermore, the more of this food it receives, the greater the tendency for rickets to develop.

Last, but not at all least, the vital element of rest, so commonly disregarded after the first sixteen months. The child should never learn that he does not want to take his nap, that he can "stay up" beyond his regular bedtime, nor that he can be awakened to be shown to guests. As part of his normal development, he should be in an environment free from excitement, irritation, and too much noise. Those in charge of him should be contributory to his peace of mind and body, or a change made. Given a start of a brain that has a capacity for normal development, an untainted blood stream, barring accidents of birth and subsequently, a Florida baby with proper nourishment, sunshine, and rest should come into his own as a normal child. In these days when "one has to run so hard to keep standing still," the doctor must be prepared really to help the parents to this end.

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## PREVENTABLE DEATHS

Figures just released for Florida reveal a noticeable decrease in the number of deaths from typhoid fever for 1928 as compared with the previous year. A reduction of 40 makes quite a showing. Scarlet fever shows a reduction of 4; diphtheria a reduction of 24; puerperal deaths a reduction of 70. The fight to control preventable diseases in this state is making favorable progress.

The annual number of deaths has increased more than seven times in this state from automobile accidents during the last decade. What can we forecast for aeroplanes? The danger or safety of this mode of travel has been a matter of speculation for some time. Last year 18 deaths were caused by airships in this state which is practically double the average yearly mortality for the last 6 years.



# PROCEEDINGS OF THE TENTH ANNUAL MEETING OF THE FLORIDA RAILWAY SURGEONS' ASSOCIATION

The Tenth Annual Meeting of the Florida Railway Surgeons' Association was held at the Hotel Alcazar, St. Augustine, April 1, 1929.

The meeting was called to order at 2 p. m. by W. E. Burnett, M.D., acting Chief Surgeon, Florida East Coast Railway, chairman of the local committee on arrangements. The invocation was delivered by the Reverend Harry Farmer. The Association was welcomed to the city by J. M. Irwin, M.D., St. Augustine, and a response on behalf of the Association was made by Joseph Halton, M.D., of Sarasota. The annual presidential address was then delivered by L. M. Anderson, M.D., of Lake City.

The president assumed the chair and reports from the following committees were presented: secretary-treasurer's report of work of the year; report of the executive committee; report of legislative committee; report of committee on necrology.

At the request of the president, H. D. Van Schaick, M.D., of Jacksonville, chairman of the scientific program committee, then took the chair and proceeded with the scientific program. The following papers were read and discussed:

"Volkmann's Contracture Following Supracondyle Fracture"—A. R. Beyer, Tampa.

"Fractures of the Pelvis"—T. H. Bates, Lake City.

"Lower Back Pain in Male Individual"—W. E. Whitlock, High Springs.

"The Tannic Acid Treatment of Burns"—N. A. Baltzell, Marianna.

Through the courtesy of H. D. Van Schaick, M.D., two moving picture reels on "Infections of the Hand", sponsored by the American College of Surgeons, were shown. These depicted most graphically diagnosis and treatment in a very important branch of medicine.

The election of officers resulted as follows: President, Harold D. Van Schaick, Jacksonville; vice-president, W. E. Burnett, St. Augustine; secretary-treasurer, E. W. Warren, Palatka.

The next meeting of this Association will be held in Pensacola on the day preceding that of the Florida Medical Association.

## STATE NEWS ITEMS

The third meeting of the Florida East Coast Medical Association will be held at Daytona Beach, June 14-15. This meeting should have been held there early in November, 1928, but was postponed on account of the hurricane.

According to Dr. J. Ralston Wells, secretary *pro-tem.*, there is being arranged an unusually attractive program. The meeting convenes at noon on June 14, and will be followed by inspection of the new Halifax District Hospital, a drive on the famous beach, and "smoker" that night. The following day, June 15, will be devoted to the scientific meetings, and a banquet and dance that night. The Ladies' Auxiliary of the Volusia County Medical Society will welcome the lady guests, and the attendance promises to be very large.

Dr. Wells is acting in lieu of Dr. Roy J. Holmes, of Miami, who was unable to give his attention to arranging the meeting on account of being general chairman of the coming meeting of the Southern Medical Association at Miami.

Dr. Stewart R. Roberts, of Atlanta, who was to have been the guest of honor at the November meeting, has signified his willingness to attend this meeting, and will address the Association at the scientific meeting. His topic is "Jaundice."

It may be stated that the primary object in forming this association was not in any way to detract from the state association, but rather to aid the mother association in strengthening organized medicine. It was recognized that, as far as the lower east coast was concerned, most of the physicians were newcomers to Florida, and were practically unacquainted with each other. As a result of the two former meetings held, the members have been brought into close contact with each other, and a feeling of good fellowship has arisen between them.

\* \* \*

The Lake County Medical Society held its April meeting in Eustis. The following members were present: W. E. Ashton and S. H. Toy, Umatilla; S. C. Colley, Tavares; Wm. J. Calvin, J. D. Coupland, M. M. Hannum, C. H. Lodor, C. McK. Tyre and R. H. Williams of Eustis.

\* \* \*

Dr. Oliver P. Broadbent announces the removal of his offices from 445 St. James Building to 209-10 Wade Building, 1022 Park street, Jacksonville.

The Florida Medical Association, in regular meeting in the city of St. Augustine, April 3, 1929, adopted the following resolution and appointed the undersigned committee to forward it to those whom it concerned:

*Whereas*, it has come to the attention of the Florida Medical Association that a bill was introduced in the United States Senate and House of Representatives proposing the establishing of a Soldiers' Home in Florida, and that the bill will be reintroduced at the approaching session of Congress, and

*Whereas*, the Florida Medical Association, by virtue of the profession of its members, has more intimate knowledge of certain established facts of medical science relating to aged and disabled veterans than the ordinary layman,

*Therefore, be it resolved*, that this Association commends most heartily the proposal of Senator Fletcher in the Senate and Congressman R. A. Green in the House of Representatives to locate such a Home in Florida and the following established facts are cited in support of the foregoing resolution:

1. Unsurpassed climatic conditions offering an equable temperature, prevalence of sunshine for more than 300 days of each year, permitting continuous outdoor recreation without endangering the health of Government beneficiaries of advancing years.

2. Due to the above cited climatic conditions, together with the altitude and situation of the State between two large salt water bodies, exceptional benefit is offered to veterans of advanced years suffering from cardio-renal diseases who do not require hospital care but do require domiciliary care. It is an established medical fact that sufferers from these diseases, and from chronic bronchial diseases, such as asthma, are vastly benefited by residence in Florida.

3. A government hospital is already established in the State; hospital care would, therefore, be immediately available at a minimum of expense to the government when required.

4. The availability of beautiful sites in proximity to lakes and woodland affording ready recreation.

5. Accessibility by well paved highways in every direction and ample railroad facilities radiating in every direction throughout the area of the south to be served by the proposed institution, and centralizing on Florida as the point of junction.

6. The safety, quiet and seclusion so advantageous to men of advanced years, but reasonable proximity to the advantages of more thickly populated areas when required.

7. The immediate proximity of an all-year source of fresh food supplies including fruit, vegetables and sea foods. Other produce not of home source is equally available.

Done in the city of St. Augustine, Fla., April 3, 1929.

(Signed) HENRY C. DOZIER, M.D.,  
President of Association.  
SHALER RICHARDSON, M.D.,  
Secretary of Association.  
L. M. ANDERSON, M.D.,  
Chairman of Committee.  
JOHN E. BOYD, M.D.,  
R. H. MCGINNIS, M.D.,

\* \* \*

Dr. and Mrs. J. H. Pierpont of Pensacola visited their old friends, Dr. and Mrs. D. C. Thompson of Jacksonville, during the annual meeting of the Association at St. Augustine.

\* \* \*

Dr. D. M. Adams of Panama City, who has been ill since September of last year, is now at his home and on the road to recovery.

\* \* \*

Dr. Howard A. Kelley of Baltimore, who is having a brief vacation in the state, visited Dr. J. S. Helms recently at Tampa. Dr. Kelley was delighted to see the new Tampa Municipal Hospital.

\* \* \*

Dr. and Mrs. W. D. Brinson of Baldwin announce the birth of twins, born Friday, April 5. The girl has been named Harriet Elizabeth Brinson and the boy, William David Brinson, Jr. Prior to her marriage, Mrs. Brinson was Miss Marie Elizabeth Smith of Dillon, S. C.

\* \* \*

Dr. E. G. Peek of Ocala left recently for St. Louis. While there, he will do post-graduate work at the Washington University.

\* \* \*

Dr. George L. Cook of Tampa has recently been elected a Fellow of the American College of Surgeons.

\* \* \*

Dr. H. Mason Smith of Tampa recently made a business trip to Buffalo, New York. While in the East, he attended the meeting of the American College of Physicians, at Boston.

Dr. G. A. Longbrake, of Fort Myers, has been appointed president of the Gorgas Health corps of Fort Myers.

\* \* \*

Dr. F. J. Waas, past-president, and Dr. Shaler Richardson, secretary-treasurer of the Florida Medical Association, attended the March meeting of the Marion County Medical Society, each rendering an excellent paper. Dr. Waas spoke on "Medical Ethics", and Dr. Richardson on "Strabismus."

\* \* \*

The members of the Pinellas County Medical Society recently met at Tarpon Springs as guests of the Tarpon Springs physicians. The program consisted of papers read by Dr. W. E. Morgan, Chicago, on "Some Uses of White Lead in Surgery" and Dr. E. W. Burnette, Tarpon Springs, on "Influenzal Meningitis." Following the meeting a luncheon was served.

\* \* \*

At the call of Dr. Henry C. Dozier, our new president, a meeting of the newly appointed chairmen of the different committees took place at the George Washington Hotel in Jacksonville, April 7th at 12:30 p. m. At this meeting Dr. Dozier outlined plans for activities during the year. The meeting was very constructive and the different phases of procedure were heartily discussed by all those present. Early evidence of enthusiasm by our new president is noted. The following were in attendance: Dr. Henry C. Dozier, president, Ocala; Dr. Shaler Richardson, secretary-treasurer, Jacksonville; Dr. Herman Watson, chairman of Committee on Legislation and Public Policy, Lakeland; Dr. Gerry Holden, chairman, Executive Committee, Jacksonville; Dr. L. M. Anderson, Lake City; Dr. E. G. Peek, Ocala; and Dr. Stewart G. Thompson, business manager, Jacksonville.

\* \* \*

The following physicians have recently been arrested by federal narcotic agents: W. E. Miller, Jacksonville; John R. Vinson, Callahan, and A. H. Weathers, Jacksonville.

\* \* \*

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## TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS  
ISSUED MONTHLY BY THE NATIONAL  
TUBERCULOSIS ASSOCIATION

Dr. Fred Heise, who contributes this number, is chief resident physician of Trudeau Sanatorium, the first institution of its kind established in this country. From the little red cottage built by Dr. Trudeau in 1885 for the treatment and care of two patients, this institution, located in the heart of the beautiful Adirondacks,



has grown to one of many buildings and has acquired a world-wide reputation. Dr. Heise, while admitting that the history is only suggestive in the diagnosis of tuberculosis, insists upon its importance and interprets the meaning of the several symptoms, which, like warning semaphores, direct attention toward the pathological conditions of this many-phased disease.

THE VALUE OF THE HISTORY IN THE DIAGNOSIS  
OF PULMONARY TUBERCULOSIS

Pulmonary tuberculosis may exist without any suggestions of ill health on the part of the patient, either in the immediate past or present. So it can be said that one must not expect to discover pulmonary tuberculosis only in those having suggestive histories.

It must be remembered that pulmonary tuberculosis very infrequently goes on to complete resolution except perhaps in young children. The more frequent occurrence is quiescence or arrest of the disease for varying periods of time, between which progressions of the disease may take place. It is remarkable what extensive disease may exist with but a very short and indefinite history of impaired health; again it is a fair-

(Continued on page 564)

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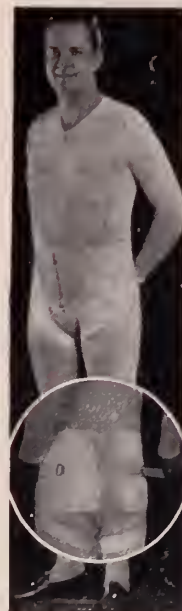
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ly common occurrence to have only a small area of lung involvement and marked ill health for long periods of time. In the long run, however, the more extensive or intensive the disease, the more certain are symptoms to occur.

#### HISTORY IS SUGGESTIVE

A diagnosis of pulmonary tuberculosis should not be made on the history alone. At the most, the history can be only suggestive, and other methods of diagnosis must be employed for confirmation. However, when pulmonary tuberculosis is known to be present, the history may be of incalculable benefit in determining the activity of the disease, but it is by no means an infallible guide even here. The constitutional symptoms, fever, undue fatigue, rapid pulse, loss of weight, night-sweats, etc., emphasize the fact that the individual is ill but draw one's attention to no special organ. The occurrence of such localizing symptoms as cough, expectoration, hemoptysis, pleurisy, focus our attention upon the lungs. Yet we know that such symptoms may occur whenever the parenchyma of the lung becomes involved with other infections, tumors, etc. Nevertheless, the practice of making a presumptive diagnosis of pulmonary tuberculosis is justified under certain conditions. We know that even today, in spite of its diminishing mortality, pulmonary tuberculosis is the most frequent chronic pulmonary infection. Pneumonia, influenza and streptococcic infections have a tendency to occur in endemic or epidemic form. In their absence, pulmonary tuberculosis must always be thought of when prolonged cough and expectoration, and especially hemoptysis or frank pleurisy occur.

#### NO INFALLIBLE SYMPTOMS

There is no characteristic cough nor sputum typical, on microscopic examination, in pulmonary tuberculosis. Nor is there a typical hemoptysis or pleurisy. It is a known fact, however, that tuberculosis is one of the most frequent causes of hemoptysis, and whenever hemoptysis occurs, tuberculosis must be excluded. Especially is this true of hemoptysis without apparent cause. The same may be said of pleurisy, and especially of wet pleurisy. Probably six to nine in every ten instances of hemoptysis of a teaspoonful or more, of pleurisies with effusion occurring without known causes, may be attributable to pulmonary tuberculosis. It must never

(Continued on page 566)

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be lost sight of, however, that pulmonary tuberculosis may occur without hemoptysis of any amount and without pleurisy of any description and, what is even more surprising, without recognized cough or expectoration. Cavities may even exist under these conditions.

#### SYMPTOMS DEMAND SEARCH FOR CAUSE

Public health agencies used to impress us with the idea that the occurrence of fatigue, loss of weight and strength, nightsweats, anorexia, fast pulse and slight fever spelled the onset of tuberculosis. In many instances, of course, it does. For these are the common symptoms of systemic intoxication, whose seat of origin may be anywhere but is frequently in the lung. Not one of the above-mentioned symptoms is in the least more characteristic of pulmonary tuberculosis than of some other disease. Nevertheless, they do signify an alarming condition whose real nature must be searched for. But if by other means pulmonary tuberculosis has been discovered, the occurrence of these symptoms aids tremendously in evaluating the activity (progress) of the process. It must be borne constantly in mind that for varying periods of time pulmonary tuberculosis may be progressive without the occurrence of constitutional symptoms, or with such slight occurrence as to cause them to be overlooked by the patient.

#### SUMMARY

There are no typical symptoms in pulmonary tuberculosis.

The constitutional symptoms point out that the patient is suffering from an active lesion.

The localizing symptoms indicate a pulmonary or pleural lesion.

Hemoptysis or pleurisy with effusion should be looked upon as tuberculosis until proved otherwise.

The constitutional symptoms are not diagnostic of the disease but afford a good index of its activity.

#### FAMILY HISTORY IS SIGNIFICANT

Other interesting things pertaining to diagnosis and in a way helping to substantiate it may be gleaned from the history. We know, for instance, that a family history of tuberculosis usually means prolonged and intimate exposure and that these conditions predispose to tuberculosis in childhood. Why some children in the same family with apparently the same exposure as others

(Continued on page 568)

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The first part of the booklet carries a reprint of an article from *Modern Hospital* written by Lulu G. Graves, which discusses the new ideas in diabetic diets. As Miss Graves is Honorary President of the American Dietetic Association, and has specialized in diabetic diets, and has collaborated with leading diabetic authorities, she is well equipped to write advisedly on this all-important subject.

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protein, the waste of body proteins often is reduced by as much as 63.7 per cent (Lusk).

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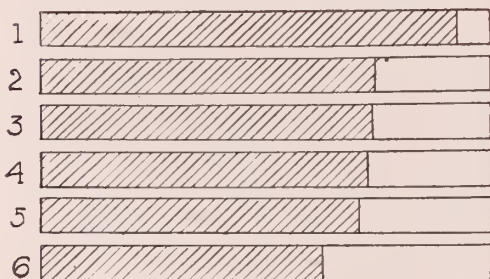
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should fail to develop the disease, while older and younger children do, cannot be entirely explained, but the fact of intimate, prolonged exposure, leading to disease in childhood, is not questioned nowadays. In adult life, a history of exposure apparently does not have the same significance.

In former years, great stress was laid upon underweight as of significance in diagnosis. More recently, Chadwick was able to show but little difference in weight in the tuberculous and non-tuberculous children until the children were 25 per cent underweight. In adults, weight is no sure measure of the presence or absence of tuberculosis. Usually, however, a slight loss of weight is noted.

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1—1309 patients complained of cough.  
2—1115 patients reported loss of weight.  
3—1114 patients expectorated freely.  
4—1095 patients reported loss of appetite or indigestion.  
5—1069 patients reported loss of strength.  
6—944 patients complained of fatigue.  
From special study—National Tuberculosis Association.

**HISTORY MAY BE NEGATIVE**

Pulmonary tuberculosis is a many-phased disease. It may exist, usually in more limited areas but occasionally in extensive areas, without any symptoms at the time or immediately preceding its discovery. Cough and expectoration may never have been present if the patient can be taken at his word. Cavities even may exist without cough or expectoration, and the patient may die without ever having had hemoptysis or pleurisy with effusion. The disease may progress without exacerbation of symptoms or even without symptoms for a while, and in spite of a progressive gain in weight. The history of the patient cannot, therefore, be an infallible guide in diagnosis or treatment, and wherever it is feasible, other measures of diagnosis should always be utilized. Particularly should the sputum be examined microscopically and roentgenographs be taken of the chest.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)

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A NEW danger to the health of motion picture stars has just been revealed. The motion picture camera, in photographing a star, adds from 5 to 20 pounds to the appearance of her figure, so that many of the screen celebrities, because of the fad for slimness, have felt called upon to undergo rigorous programs of dieting.

*Photoplay Magazine* recently announced that many of the stars have suffered collapse because of this dangerous practice. One famous star died of tuberculosis aggravated by weightreduction. Another ruined her career and was made an invalid by starvation. Still another resorted to quick-reducing medicines and is today virtually an invalid. Another star, as mentioned here, collapsed on a set from trying to lose 10 pounds.

One of the alarming dieting extremes indulged in by the stars, according to *Photoplay*, is eating no food at all for breakfast, and seriously limiting the quantities of nourishing foods for both luncheon and dinner. It is small wonder that such a wrong standard of diet should result in disaster. No person can be healthy without eating enough nourishing food, daily and regularly.



Physicians and nurses and teachers, looked to by the public as health authorities, should help bring a speedy end to the dangerous practice of indiscriminate diets to reduce.

The "boyish" figure is a false standard of feminine beauty, and its attainment is likely to be at the price of permanent injury.

Modern health opinion recommends a variety of foods, including vegetables and fruits, both fresh and canned, sweetened for enjoyment. Sweetness is the flavor that encourages the ingestion of nearly all the healthful

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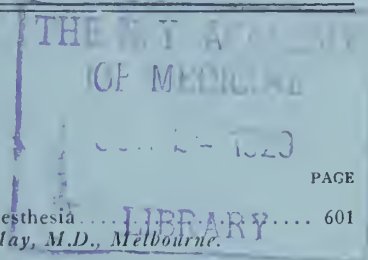
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### CONTENTS

	PAGE		PAGE
Fractures of the Skull.....	585	Brachial Plexus Anesthesia.....	601
<i>J. Ralston Wells, M.D., Daytona Beach.</i>		<i>I. M. Hay, M.D., Melbourne.</i>	
Brill's Disease .....	594	Editorials: (1) The Illustrating of Original Articles;	
<i>J. A. Mease, Jr., M.D., Dunedin.</i>		(2) Infant Mortality .....	603, 604
Tannic Acid Treatment of Burns.....	597	State News Items .....	604, 605, 606, 610
<i>N. A. Baltzell, M.D., Marianna.</i>		Tuberculosis Abstracts .....	606-608
Volkman's Contracture (Ischemic Paralysis).....	599	Schedule of Meetings—Component Societies.....	609
<i>A. R. Beyer, M.D., Tampa.</i>		Index .....	610, 612, 614, 616
Hemorrhage of Ovarian Origin—Case Report.....	601	Index to Authors .....	618
<i>George Frederick Oetjen, M.D., Jacksonville.</i>			



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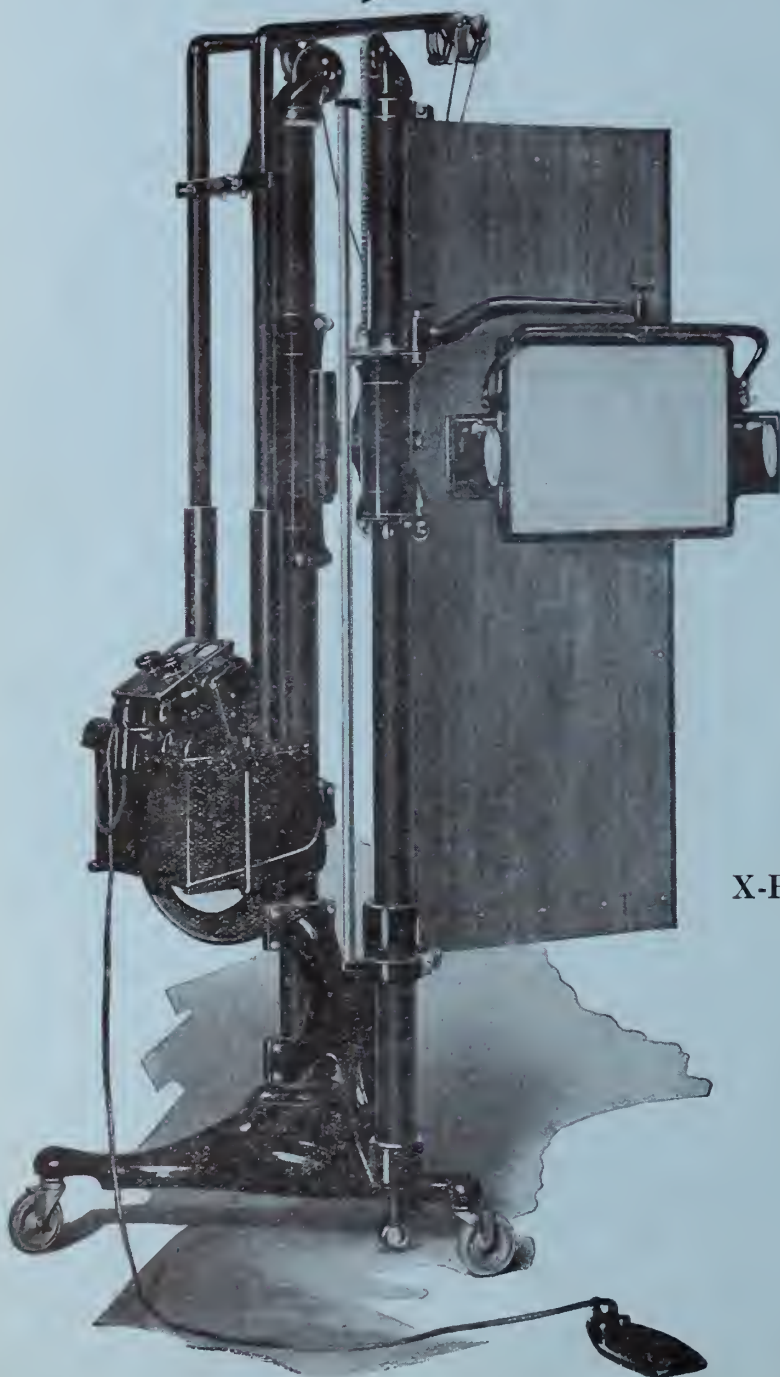
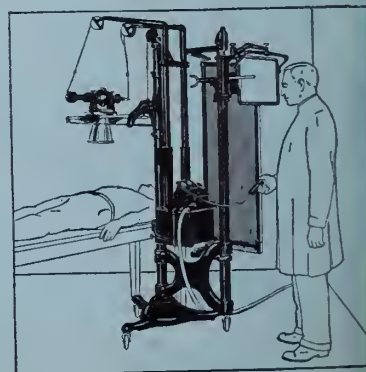
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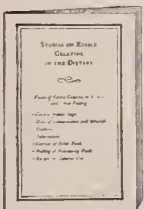
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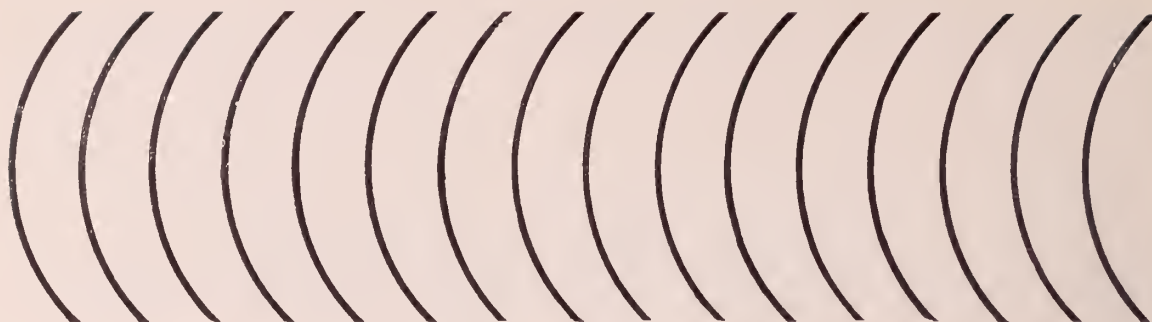
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# THE JOURNAL OF THE FLORIDA MEDICAL ASSOCIATION

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## FRACTURES OF THE SKULL.\*

J. RALSTON WELLS, M.D.,  
Daytona Beach.

While a fracture of the skull may recover without the development of any untoward symptoms, the seriousness of such injury is dependent upon the original intracranial damage and the subsequent intracranial complications which may develop.

The early diagnosis of head injury is important, but a hastily drawn negative conclusion because of lack of immediate indicative symptoms is often a cause for regret.

Likewise, the patient with some symptoms due to concussion which soon disappear, must be carefully watched for the development of secondary symptoms such as intracranial hemorrhage. In my opinion, every head injury *with* or *without* fracture, (because hemorrhage can and does occur without demonstrable fracture of the skull), should be considered serious for three to five days subsequent to the injury and should have careful, minute and intelligent watching *at all times* during that period.

The term of early diagnosis as I use it, implies not especially early in regard to time *after the injury*, but to time in regard to the onset of serious symptoms or conclusive signs following a mild degree of injury. A case in point. A patient in a mildly shocked condition with apparently a slight degree of concussion and a demonstrable fracture without displacement of bony fragments, may, after twenty-four hours, show development of pressure signs of serious import. Appropriate treatment is instituted before serious conditions are actually present. This is early diagnosis. Or if, after careful close watching for several days, all symptoms and signs, including X-ray, are approximately negative, we are reasonably sure that no condition of intracranial damage exists, this again may be termed early diagnosis, but the term applies especially in diagnosing a serious lesion *before* the seriousness has progressed.

*Classification.*—There are many classifications of fractures of the skull. We may have a linear,

stellate, comminuted, compound, and so on, but the most simple, and one with the more important bearing on our conduct of a case, is that as to the location and damage done; in other words, fracture of the vault or fracture of the base. A possible third might not be amiss, which embraces a vault fracture running into the base, and showing symptoms of each. In this instance, however, one set of symptoms usually predominates, and we treat our case accordingly. But as our treatment divides or hinges to a great extent on the above two groupings, it appears to me to be a very useful and practical classification. Learned and profound discussions may be held on the difference between a stellate fracture of the vault and a linear fracture of the base as to which type it belongs, but the important factor in treatment is not whether it is stellate or linear, but whether it is of the *base* or *vault*.

*Symptoms and Signs.*—Symptoms of fracture of the skull, as often enumerated, are symptoms of lesions of the brain in general, or its unit constituents and coverings. The important symptoms or signs of fracture per se are few and definite: 1st, a palpable rough edge or depression of bone, usually through an already existing scalp wound, or through the scalp without laceration; and, 2nd, bleeding or bloody serum from ears, nose or pharynx; 3rd, subconjunctival hemorrhage; 4th, positive X-ray findings, always bearing in mind the possibility of a fracture so-called contra-coup, which may exist without external evidence of the head, are all that are directly referable to the fracture. The symptoms as we usually think of them are those expressing the presence or absence of the serious complications. These complications are many; the principal ones will be briefly mentioned as we proceed.

Before treatment is definitely established, I would suggest the importance of an X-ray in all cases, and the advantage of reading your own films, not only for accuracy or a check, but to produce a mental picture of existing conditions. This procedure materially aids in our early diagnosis, which, in addition, should be based upon activity, shape, size and equality of pupils, bleeding from the ear, bulbar symptoms such as stertorous or shallow breathing, cyanosis, etc., quality

\*Read before the 56th Annual Meeting of the Florida Medical Association, St. Augustine, April 2, 3, 1929.



and rapidity of the pulse, and presence or absence of paralysis.

After the primary examination has been made, and the major line of treatment decided upon and started, the more thorough, the more exact points may be ascertained.

The pupillary reflexes or rather, the absence of them, are of great importance. The unequal pupil may exist very early or later, but when it



FIG. 1. Right Temporal Fracture.

is present the other signs of serious import are generally found also. The dilatation usually occurs on the side of the brain injury. We may have equal and dilated pupils in fright, shock, nausea or concussion, with or without fracture; on the other hand, those equal and normal may develop into unequal pupils after a time, usually indicating progressive intracranial hemorrhage.

Transient unconsciousness often indicates a mild concussion at the outset, but may develop into a deeper coma or after clearing up for a time, again occur. Both these conditions point toward hemorrhage, or at least, intracranial pressure.

The pulse, if rapid, may show concussion or shock, possibly hemorrhage, and if so, a cerebral compression from edema, or continued hemorrhage. Coincident with the pulse, the respiration often changes. Slow, shallow breathing indicates pressure, and the same may be said for a rapid and deep, or irregular, respiratory cycle, while irregular pulse and stertorous respiration are often terminal signs. Palliate with pulse be-

tween 66-90 unless strong indications for other procedures exist. With decreasing pulse rate steadily into the 60's, or rising above 112—tap and wait, if no improvement in one hour, operation should be done. A weak, rapid or very slow pulse generally means increasing pressure and approaching or deepening coma. Here at times an operation must be done, understanding the procedure has an extra element of danger, especially an immediate table death.

*Respiration.*—The character of respiration, as well as rate, must be noted before treatment is decided upon. Slowing in rate but no change in depth is not alarming unless rate is below 12. Slowing in rate with shallowness, irregularity or sighing at the end of each expiration, all show increasing pressure, and tap should be done and result noted. If no improvement in one hour, operate. So-called Cheyne-Stokes respiratory type, as such, has little bearing.

Bleeding from the nose, or throat, may be from sources outside of the cranium; thus the source should be carefully ascertained, but if



FIG. 2. Right Temporal Fracture.

from the internal ear, it is always from a skull fracture, and needs no further check-up.

These signs that I have enumerated, may be coupled with paralysis at the onset, or the reflexes may be first hyper, then hypo active, and the paralysis ensue. When a paralysis or localized muscular weakness is present, it serves to give us the localizing signs for operative procedures; it does not necessarily add gravity to the outcome.

*Temperature.*—While temperature is of importance in aiding a decision in many head injuries, it cannot be permitted to unduly influence our decision as to the method to be pursued. The value of temperature records is largely dependent upon the experience of the operating surgeon. Steadily and rapidly mounting temperature shows loss of cerebral compensation in the thermal centre, and the sudden mounting of several de-

succeding taps show progressively less blood, it is considered favorable. If fluid is clear, 20-30 mm. hg. pressure, X-ray findings positive for fracture and with signs of intracranial pressure no fluid should be withdrawn or drawn with ex-



FIG. 3. Fractured Skull.

grees after 24-48 hours often means meningitis.

*Blood Pressure.*—A rising blood pressure is indicative of increase of cerebrospinal pressure. Blood pressure alone means little, but a steadily mounting pulse pressure and a falling pulse rate means intracranial pressure. Palliative measures should be carried out until pulse rate crosses pulse pressure; when this occurs, operate. If, for example, a pulse rate has been 84, drops down to 72, to 60, and the pulse pressure that has been 40 changes to 46, to 48, or higher, and the pulse keeps dropping into the 50's, then operate without delay. It is the "zero hour," and no more palliation is justified. This is Frazier's rule, and I have found it of great value in decisions in numerous instances.

Our spinal fluid findings, as a diagnostic measure, are often not only indicative, but give exact knowledge. Pressure of over 18 mm. hg. should be watched carefully, and repeated in 12-24 hrs. as indicated. Fluid is withdrawn until pressure is below 16 mm. hg., and remains so. If fluid is bloody or blood-tinged and under pressure, and



FIG. 4. Lateral Fracture of Skull.

trema care, because an extra dural hemorrhage is probably present, and release of pressure may mean more hemorrhage.

Many other signs and symptoms, such as convulsions, local or general, starting several times in succession in the same manner, involving the same areas in succession; blindness or blurred vision, immediate or coming on within twelve



FIG. 5. Right Lateral Fracture of Skull.



hours, the patient being conscious; persistent headache, deranged or absent taste faculties; are all indicative of intracranial complications. These are more or less important, some as to the gravity of the lesion, and the prognosis, some as to the advisability of operation, and some as to the localization of the lesion. However, these are too numerous to discuss in detail here, and are, in most instances, more for guidance to the operating surgeon, than for a differential diagnosis.

I do not believe a head injury serious enough to involve the question of presence or absence of fracture, ever occurs without the presence of concussion, or contusion or laceration of the brain. The concussion may be so slight that it is almost unnoticed, or it may be so severe that a profound state of unconsciousness exists for hours or days and has co-existing contusion or laceration.

As I have indicated, there are two main lines of treatment, palliative or expectant, and operative. One may pass into the other as the patient's condition alters. Operative includes simple decompression, drainage of the basal fossas, operation for relief of definite symptoms when localized, release of definite local pressure caused by bone or hemorrhage, or to remove lacerating spicula.

Palliative treatment consists of:

1. Routine spinal pressure readings.
2. Sat. sol. mag. sulph. per rectum every 2-6 hours.
3. Absolute quiet—darkened room.
4. Liquid diet—ice cap to head.
5. Absence of drug therapy per mouth.
6. In basal fractures, antiseptic spray to nose and throat every two hours. Antisepsis to ear when escape of blood or spinal fluid is present.
7. Repeated spinal punctures, every 12 to 24 hours.
8. Intravenous hypertonic salt solution.
9. Cisterna puncture.

A word about spinal and cisterna punctures. A puncture of the subarachnoid space should be conducted at all times with major operative precautions. Thorough cleansing of hands. Disinfection of the skin. Area to be punctured should never be a small "dab" of iodine, or worse yet, mercurochrome. A lumbar puncture is usually performed through Quincke's or Tuffier's point, and should demand a skin preparation inclusive—

laterally the iliac crests, above the second lumbar and below—second sacral segment. A local anæsthetic in the skin *always*—if patient is conscious, it is necessary; if unconscious, the absence of anaesthesia may rouse the patient to a resistant attitude and make an otherwise simple procedure difficult. The skin should be punctured by a tenetome down through the spinal ligaments to minimize the resistance of the skin to the needle, and thus allow more delicate touch felt for the tip. Introduce the needle in midline and at right angles to the skin surface. If lateral introduction is made, bloody fluid is likely to be obtained that is not of intraspinal origin. Drain



FIG. 6. Parietal and Midline.

until manometer shows 12-16 mm. hg. or fluid drips instead of flows from a No. 19 needle. (See technique in article "Annals of Surgery," May, 1927, page 75.) A cisternal puncture is no more difficult, and should not be feared nor put off too long. If release of spinal fluid does not give amelioration of signs of pressure, a cisterna puncture is often the next step made. Wide skin preparation is advised, and should include an area from the mid-occiput to second dorsal vertebra. Puncture on a line on level of tips of mastoids—close to the under surface of the occiput—placing the needle directly in at right angles to skin. Usually a needle of No. 19 calibre is used and fluid withdrawn slowly. This latter precaution is much more important to observe in cisterna than in spinal puncture.

The spinal puncture is not only valuable in treatment, but often indicates, when all other



diagnostic measures fail, a differentiation between prolonged shock and early concussion. I have never seen hypotension with concussion, although there are numerous reported cases of this kind. If spinal readings keep below 16 mm. of hg., little fear need be had. A rise demands more vigorous treatment. A saturated solution of magnesium sulphate per rectum in one ounce doses every two, four or six hours, is to be used, and is often sufficient to hold the pressure in safe limits. All sensory stimuli are to be avoided—light, sound, visitors, or excitement are to be eliminated. An ice cap to the head and neck is not only grateful to the patient, but aids in controlling the feared medullary edema. Liquid diet of fair caloric value is necessary; if nausea is present, 10% glucose solution per rectum is efficacious, not only as nourishment, but to avoid dehydration, which condition is capable of establishing confusing signs together with the existing ones.

Drugs should be avoided. Small dose of morphine or codeine may, under necessity, be used; corresponding doses of atropine are given coincidentally to counteract possible effects on the medullary respiratory center. If drug therapy is apparently indicated, the cause of the indication is central, the lesion is already being treated as vigorously as is safe, and additional treatment by powerful stimulation is not only valueless, but often harmful.

I am well aware of the opinions held as to the advisability of spraying the nose, throat or ears, with an antiseptic solution, if they show bloody discharge. I have both sprayed and carefully antiseptized the cavity, placing a loose cotton pledget in place, and am guided as to which method to use by the amount of flow from these orifices. If carefully done, I do not think the danger of carrying outside infection is very great, and certainly the antisepsis is needed in these cavities to guard against an ascending infection. Spinal or cisterna puncture is indicated daily or bi-daily, if pressure is above normal and is kept up as long as the pressure is over 16 mm. of hg., or until pressure rises above this point and cannot be controlled, at which time operative procedures are to be instituted. A tap will show the initial pressure, which should be slowly reduced to below 12 mm. Rising blood pressure may often be successfully treated by means of an intravenous solution of hypertonic salt solution repeated daily. I have used an intravenous in-

jection of 60 cc. of distilled water with satisfaction on several occasions. This is especially of value when dehydration is present, and operative measures are necessary. If the intravenous



FIG. 7. Parietal into Temporal.

treatment is used twice in the two hours preceding operation, checking with the Baunometer, at operation the brain bulk is found reduced, herniation less and the body fluid content that much



FIG. 8. Fracture into Foramen Magnum.

the greater. Cisterna puncture may relieve a pressure not otherwise controllable, and should be used more often than it is before a major operation is instituted.

Operative opening of the cranium should not be avoided where indicated, nor be put off too long, but is often the spectacular rash proceeding when safer, less dangerous courses are open. Operative procedures are of many and various kinds, depending on the kind and position of the lesion. The entire head should be shaved, the scalp thoroughly cleansed with alcohol, benzine, ether and iodine. Anaesthesia is an important consideration. Local alone should be used wherever possible, and always used even when a general ether is necessary. Never use adrenalin chloride;



FIG. 9. Right Mastoid Fracture.

the pressure is too high already. This point is often overlooked, especially by those of us who are in the habit of using a local anaesthetic, for major work in other parts of the body. Many times the patient is only semiconscious and little or no anaesthesia is necessary, but to stop all sensory impulses a well-placed block anaesthesia is essential; I have never found the dura to have sensory sensations. The brain is likewise without sensation. For the simple relief of pressure, the temporal decompression as advocated by Cushing is to be preferred. This opening can readily be ronguered larger in any direction. A Crown trephine or an Albee saw are both efficient. Intracranial work should be carried out as indicated by: 1st, the appearance of hemorrhage, either in the form of clot or active bleeding; 2nd, appearance of the dura or the underlying brain. It is rare that the incision of the dura is not indicated. With bluish, dusky-colored bulging brain

tissue, boldly puncture with a fair-sized needle. Little actual damage can be done, when care is exercised; if blood is found, aspirate all that can be obtained at the time; do not attempt a permanent drainage. If, on the other hand, a bulging brain is found without discoloration, gently push it aside and by using a convenient fissure, in the usual decompression area, the Rolandic fissure, the basal area may be tapped. A curved Kelly haemostat is not too large. If fluid under pressure is met, leave the forceps in place temporarily, and using them as a guide, introduce drainage, usually rubber tissue; a small soft tube is also efficient. If fluid is not met on the first attempt, search gently more anterior or posterior. If the brain is bulging, if no discoloration is present and the fluid is not found at the base, a puncture into the fourth ventricle is indicated. This condition is of grave import. The ventricle may be found to contain pressure fluid and can be relieved by puncture. As the ventricle should not be permanently drained, if one tap does not relieve permanently, and if the pressure again rises, the issue is usually fatal.

Variations of operation may comprise a bilateral decompression; the trephine and raising of depressions of the entire skull thickness or of the inner table alone; removing of piercing bony spicula into the brain tissue. I have seen sight restored within two hours after the removal of a sharp bone fragment. Large osteoplastic flap operations are not often indicated, and many times after recovery a brain hernia gives very distressing results.

A venous sinus if opened accidentally, or torn into by a bone fragment, is controlled by means of gauze, gently, firmly, and carefully packed in; iodoform gauze, 5%, is my preference on account of its mildly antiseptic qualities. Infection is most to be feared following this procedure; clot is of secondary importance.

Bleeding from the scalp can be controlled by a continuous whipping suture of heavy silk; in the scalp wound margin, bleeding from the bone or from a particularly persistent bone venous channel, bone wax is indispensable.

An operation anywhere should proceed with all speed possible, but deliberation and care should never be sacrificed. In the head injuries, this latter is especially true. Speed should be sacrificed for gentleness and care when necessary. Mild hemorrhage during operation should be controlled with hot cotton pledgets, and these

cotton pledgets should be used for temporary walling off. The usual surgical gauze sponges should not be used. Rarely is a tie necessary in the dura, and never in the brain.



FIG. 10. Right Frontal Fracture.

On tapping the middle fossa or the ventricle, if a rush of fluid is encountered, immediately control it and allow it to drain off slowly. If too rapid release of pressure is permitted, a fatal collapse is imminent. A conscious patient will often groan, vomiting may take place, or a rapid pulse and respiration will become the dominant factors. If these latter signs are present, stop all procedures, and if a satisfactory amelioration of symptoms does not ensue within three minutes, apply temporary dressings, give quickly acting cardiac and respiratory drugs. Usually a rapidly fatal termination results.

If drains are left in the cranial cavity, they must be removed not later than the fourth day after operation. Often twenty-four to forty-eight hours is sufficient. A wet dressing of hypertonic salt solution and an ice cap aids in keeping up the drainage. All palliative procedures, except lumbar and cisterna punctures, may be used in post-operative care.

I have said very little regarding drugs. Digitalis or bromides or what not may be used with discretion where indicated, and more especially after a definite diagnosis has been made, or after operation. The use of alcohol, strychnine, morphine, or codeine, soon after the injury, should usually be frowned upon; they serve many times

to cloud the very signs that are of extreme importance. If painful injuries other than the head have been sustained, and morphine is absolutely necessary, use a small dose and guard it well with atropine. Make a mental note of it, or if a consultant is called, be sure to state the fact of having given morphine, so that due allowance may be made for any unusual change not readily accounted for.

A study of all head injuries will show the greatest numbers of recoveries in cases when palliative treatment was used, but this is due to the fact that these cases are of the less severe type, rather than that operative procedures are in themselves the cause of a higher mortality.

*General Summary.*—The prognosis depends



FIG. 11. Occiput and Left Frontal Fracture.

upon the severity of the initial lesion, the promptness with which a proper diagnosis is made, and the plan of treatment carried out. Fixed pupils at the onset of the lesion usually indicate a grave outcome. Cases with mild concussion, even mild extra dural hemorrhage, usually recover completely with palliative measures. Small areas of pressure from bone or hemorrhage that are relieved with fair degree of promptness, are not serious.

Internal brain, ventricular pressure, is serious, while prompt relief of basal pressure very often results in complete recovery. Loss of brain tissue and laceration of the brain often are of surprisingly little import. Sepsis in the form of meningitis is the most to be feared in a com-



pound fracture or post-operatively, and is usually fatal. The treatment in this complication is, of course, that of prevention. Persistent headache, giddiness or even syncope are not unusual symptoms which may persist for months after a severe brain lesion. Constant care and attention to hyper or hypotension of the blood pressure and free catharsis should be carried out for at least six months. Post-operative nursing and care is essential to recovery, and should be as carefully planned and carried out *to the letter* as the operative procedure. One act of carelessness, or one detail overlooked, may mean the difference between success or failure in recovery from a fracture of the skull. This includes from the time of accident to complete recovery.

In summary, I wish to add that the conduct of the case depends upon careful, systematic study, of signs and symptoms of the particular patient, together with sound surgical judgment, at the time when these signs and symptoms first become evident.

#### DISCUSSION

*Dr. E. H. McRae, Tampa:*

We have listened to a very complete and thorough paper, as I see it, on fractures of the skull. It would be futile for me to discuss at length the different interesting points that Dr. Wells has given us. I will therefore only stress a few of the points of interest to me in head injuries.

Every head injury, in my opinion, should be considered a serious condition and should be carefully watched at all times. Another point is this: that all head injuries should be X-rayed, regardless of how insignificant you believe the symptoms which exist.

Another point of interest is the Frazier rule regarding the pulse rate crossing the pulse pressure. That, I believe, is a standard thing and we cannot go wrong by adhering to this principle.

Dr. Wells did not bring out in his paper head injuries of children. It is well for us to remember that the pulse rate is higher in children, the pulse pressure lower, and the pressure of spinal fluid is lower than in the adult. So, this is a point well to remember in determining the amount of pressure or the extent of intracranial concussion.

*Compound Fractures.*—I think it is well where you have devitalized tissue to thoroughly cut away, in other words, do a complete debridement of the wound, in order that you get back to a good blood supply. Also to prevent infection of the wound.

Another good routine is to use antitetanic serum as a prophylactic. As a rule nearly all of our head injuries are produced in this day and time with the automobile. All of you on general service in the hospital realize the number of head injuries suffered today. In many instances those injured are thrown out and come in contact with the soil, and for that reason antitetanic serum is indicated.

Regarding drainage: I do not believe it is proper to leave drainage longer than twenty-four hours unless it is an exceptional case. There are some good men who do not use drainage in the majority of their cases.

I want to again express my appreciation of Dr. Wells' excellent paper on this subject.

*Dr. Harold D. Van Schaick, Jacksonville:*

I want to thank Dr. Wells for a most thorough and well-balanced paper on this subject, as it is one of increasing importance to all medical men.

There are one or two points to be stressed. Complete and exact knowledge of the circulation of the cerebrospinal fluid is an absolute necessity to intelligently treat fractures of the skull and their complications.

Classification is of scientific interest but of greater importance is the knowledge whether there is a depression, increasing intracranial pressure or hemorrhage. If there is depression or hemorrhage, an operation must be done at once. If increasing intracranial pressure is present, as manifested by restlessness, increasing pulse and temperature, then decompress, do spinal punctures or administer dehydrating agents as you choose. Do not give morphine as ordinarily these patients do not have a great deal of pain. This drug soothes the patient and conceals from the doctor the chief sign of cerebral irritation: restlessness. Have the temperature, pulse and respiration taken every thirty minutes and in the face of restlessness, increasing pulse and temperature, regardless of your personal choice as to treatment, decompression must be done to save the patient.

The measurement of the cerebrospinal pressure by the manometer, I believe to be valueless, and to base one's decision for or against an operation on one or two points, more or less up or down a manometer gauge, is as erroneous as to place absolute faith in any mechanical diagnostic device.

The indications for decompression are depression of the skull, hemorrhage, paralysis and in-

creasing intracranial pressure. Operations performed too early bring discredit on surgery, as a patient with sufficient brain damage to die within a few hours after an accident will die in spite of the best performed decompression.

If one is doubtful at times as to which side to decompress in certain cases of hemorrhage, a drill hole on either side with a small incision through the dura will tell the story and frequently prevent an unnecessary operation.

*Dr. Mary Freeman, Perrine:*

I have enjoyed this paper very much. And I thoroughly agree with ice packs for the head, but I also put hot water bags to the feet and limbs. I get all of the blood from the head that I can.

Now, I use morphine. If you will quiet that reflex system you will often save a patient from an operation, which is safer for him.

When a patient receives a serious head injury I direct them to leave him where he is until I get there. I am very particular about how that patient is moved. I believe in the X-ray if you are in reach of the X-ray, but if you are twenty miles from the X-ray you had better just move that patient in the shade or somewhere and put heat to the body and cold to the head and give him morphine enough to quiet him (not an excessive dose;  $\frac{1}{4}$  gr. will very often answer the purpose), until you get signs that you need to operate. I have had them bleed from the ears and still recover without operation. I would have favored an operation had the signs gone on for it. But with these head injuries you had better follow the second letter of the alphabet, "letter B," for quite a while.

#### CONCLUSION

*Dr. J. Ralston Wells, Daytona Beach:*

I have several slides to run over very hurriedly in conclusion. X-ray of the skull is very difficult for us to put on lantern slides.

FIGURES 1 AND 2.—This is a man, age 35 years, who had a "Y" shaped fracture in the right parietal bone running into the temple and to the base. The basal fracture was seen very readily. He was not operated until the third day, when pressure signs developed. Operation—tap and drain of middle fossa—recovery.

FIGURES 3, 4 AND 5.—Little girl, 4 years old, had been hit by the bumper of automobile. Fracture, as you may see, of the occiput, a depressed stellate fracture with one long limb running forward. This entire fracture was very much depressed. There was no basal involvement. She was treated by primary operation and in four hours by major work relieving the depression. It is interesting to note that blindness ensued one hour after accident. At second operation a long spicule of bone was removed from the brain cortex with perfect recovery of eyesight in 24 hours.

FIGURE 6.—This is a fracture of the vault in a child of 6 years, which you see running down into the midline and branching off to right parietal. No severe symptoms; treatment: rest in bed until pulse resumed normal rate, 16 days. Recovery.

FIGURES 7 AND 8.—This is a man 58 years, with a left parietal fracture running into the temporal region, and a linear fracture of the vault. It is interesting to note that this patient also had a fracture running into the foramen magnum. No complications for four days, then developed a sudden hemiplegia. That means a carelessness in watching. That patient was not brought into the hospital early. He was watched at home, and when the paralysis developed he was rushed into the hospital just in time to be decompressed. Paralysis passed off in a few days—recovery.

FIGURE 9.—This is a girl 18 years old with a right mastoid fracture. She was not X-rayed until long after the fracture happened. At the time of the accident she was not unconscious over ten minutes and was taken home with slight bleeding from the right ear. A physician pronounced her perfectly all right. This girl fell on the ice in the North one month before X-ray examination. The fracture is in the right mastoid region. There is a small arrow pointing to it. It is a very minute fracture. It was not operated. She was given no treatment whatsoever and developed severe headache and fainting spells; eight months after the fracture she was still having fainting spells, very severe headaches and was very nervous—all of which, I believe, with the proper treatment for the first four or five days, could have been prevented.

FIGURE 10.—Man of 36 showing a fracture of the right frontal region, two small arrows can be seen if noted carefully. A few minutes of unconsciousness and slight bleeding from the nose ensued after the accident. A severe headache for about three days. No operation, no symptoms developed of trouble. Discharged on the 7th day after accident.

FIGURE 11.—The last is a fracture of the occiput and left frontal, stellate in both instances. Undoubtedly there was a basal fracture also, but emergency precluded more X-ray work. Patient unconscious, bleeding from left ear, and nose. Stertorous breathing, unequal pupils, dilated on the left side, and very rapid pulse. Never regained consciousness. Died in 40 minutes after the accident. I think there was a hematoma in the occiput. Post mortem was refused.

I want to thank Dr. McRae for his discussion on complications. I also give antitetanic serum in all head fractures, but rarely before twenty-four hours or sometimes as long as seventy-two hours after accident. I believe that a rising temperature from the serum may confuse use in the early symptoms, and the antitetanic serum is safe within two or three days after the injury for its use as a preventive measure.

I always operate, of course, for depressed fractures, as Dr. Van Schaick said. And I agree with you very thoroughly that a patient who is dying or is going to die in two to four hours probably is going to die anyway, and it is better to palliate to see if you can get them in a better condition because a table death is sometimes blamed on the operation rather than the injury. Don't forget to operate early, but not too early.

Dr. Freeman: I thoroughly disagree in giving morphine in these cases, particularly in borderline cases.



## BRILL'S DISEASE\*

J. A. MEASE, JR., M.D.,  
Dunedin.

Typhus fever ordinarily is so rare that it is seldom considered by the physician in making a diagnosis. It is becoming more prevalent in the entire South, according to the United States Public Health Service, and it behooves all of us to be on the lookout for it. In the last two years a number of cases have been seen and reported in Pinellas and Hillsborough counties.

This disease is known to be transmitted by the body louse, and as someone has said, "in inverse proportion to the amount of soap used." No doubt all of you have seen typhus fever and are acquainted with its manifestations. I am not going to relate the classical textbook picture of typhus, of which the mild form is known as Brill's disease, but describe it as I have seen and treated it here in Pinellas County.

The positive diagnosis of this disease is made by titrating the blood serum of the patient against a strain of protens X<sub>19</sub> which was isolated by Weil & Felix in 1916 from the stool of a patient suffering from typhus fever.

The following report covers patients suffering from Brill's Disease seen in Dunedin, Clearwater and Palm Harbor. Cases of the disease were seen from April to October, 1926, during the period of summer heat and mosquitoes. Positive agglutinations of the Weil-Felix organism were obtained on three cases during the latter part of their illness. Agglutinations showing the reaction from "slight to partial" in 1 to 160 were obtained on four cases. Two sera were negative. In the cases showing negative and partial agglutinations, the blood was not obtained for titration for an average of three months after the patients had recovered from the disease. Inasmuch as the titre decreases and becomes negative in a few months after the recovery from Brill's disease, this could explain the low titre obtained in some cases, which was probably much higher during the latter part of the illness. In twenty-one cases, sera for examination were not obtained, due to the fact that there were so many ill and no hospital facilities were obtainable. The thirty cases which this report covers were all negative for typhoid, para A and B. No malarial parasites or spirochetes were found in the blood smears, which were taken many times. Dengue was ruled out not only by the course but by phy-

sicians who had seen dengue in all its manifestations, and by several of the patients who had had dengue and who said that this fever was "entirely different." This disease more nearly resembles typhoid than anything else, and I believe it can be differentiated sometimes from typhoid only serologically.

A description of Brill's disease, as seen here, follows:

I divide the disease into three stages: the pre-eruptive, the eruptive, and the post-eruptive.

In the pre-eruptive stage, which lasted from three to five days, the patients were feeling well before the onset, which was rather abrupt, some of them going to bed feeling well and getting up in the morning with a headache and feeling bad. The headache was very severe and codein in therapeutic doses failed to relieve it. Pain in the eyes and "back of the eyes" was also complained of. A distinct chill, lasting thirty or forty minutes, or chilly sensations were always present, most often the first or second day. Nausea, vomiting, pains all over the body, especially in the head, back, arms, legs and splenic area, and vertigo were present. Sometimes a bronchitis is present at the onset. The fever during this stage is remittent, but never entirely leaves the patient; the fever becomes continuous during the eruptive stage. The pulse never was over 100 and respirations about 20.

The eruptive stage lasts about one week. A characteristic rather offensive odor is emitted from the breath and body. The skin usually has a bluish tinge. The rash is macular and maculopapular and does not entirely disappear on pressure. It is first noticed on the chest and back, then on the arms, then on the legs and face. It was not observed on the palms or soles. The rash is red and definitely raised; it disappears in five to seven days. Occasionally the rash persists as brownish discolorations after the patient is afebrile. During the eruptive stage the temperature remains fairly constant from 103° to 105° F., but has gone as high as 106° and remained there for one-half hour. The patient during this period is very restless, refuses all food; everything offered, including water, "tastes bad," and some patients accused their nurses of trying to poison them because the water tasted so peculiar. The patient may become maniacal. He may not recognize any of the family or friends and believes them to be enemies. He tries to get out of bed and requires restraint. The bowels may be constipated or loose. The spleen may or may not

\*Read before the Pinellas County Medical Society, Clearwater, Jan. 13, 1928.



be enlarged. The pulse often becomes dicrotic and the nose may bleed a few drops. The patient is very toxic.

The post-eruptive stage begins when the rash starts to fade, that is about the fourth or fifth day from its appearance, and it fades usually in three or four days, but may leave brownish discolorations on the skin when the patient is convalescing. During this stage the temperature has wide daily variations. The patient has exhausting sweats and loses weight rapidly. The pupils may be dilated and spleen disappears. The convalescence is fairly rapid and weight is quickly regained. Usually the fever terminates either by crises or rapid lysis when the rash fades, but may persist as slight morning rises for two or three days and is then subnormal for three or four days.

The physical examination is conspicuous by its absence and only reveals a slight non-purulent conjunctivitis, slight retinitis, coated tongue, and sometimes an enlarged and tender spleen, which may be associated with a general glandular enlargement. The pulse is usually under 100 and in the eruptive stage may become dicrotic. Respirations are regular and are usually about 20. The blood pressure shows a progressive drop, often amounting to 30 m.m. of hg. The systolic pressure falls more than the diastolic pressure. The diastolic fall is usually less than 20. The pulse pressure is often not more than 20. The first sound of the heart is lessened and may become inaudible.

#### LABORATORY FINDINGS

There is a leucocyte count usually under 9,000, with a polymorphonuclear count of 60 to 80. The red cells look fairly normal throughout the course, and the hemoglobin may be only 50. The urine shows hyaline and granular casts with a few pus cells and usually negative albumin and sugar. The blood culture in bouillon was sterile.

*Complications:* Bronchitis, nephritis, myocarditis, and acute mania.

*Treatment:* Symptomatic; codeine, forced fluids, alkalies, digitalis. Quinine, I believe, is contraindicated. Pills of acriflavine were given with apparently beneficial results. Blood transfusion is highly recommended.

#### REPORT OF CASES

Mrs. W. M. White, female, aged 34, married. Past history: had pneumonia in 1916, malaria in 1922, otherwise negative. July 27th patient had a slight chill in the evening. Woke up the next morning with a temperature and severe

headache. July 28th, temperature was higher and headache worse. She also began to ache all over and had a pain over the splenic area. Nausea and vomiting, with loss of appetite, continued until August 1st, when a macular rash appeared over the trunk and extended to the extremities and face. Her temperature from then until August 8th stayed around 104. Physical examination was negative except for a dusky hue to the face and large and tender spleen. Retinitis, conjunctivitis, coated tongue, and peculiar odor. Rash began fading August 5th and was gone August 7th. Her temperature began dropping August 7th and was normal the 10th. Spleen was not palpable on the 7th. From the 7th to the 10th the patient had exhausting sweats. Blood agglutinations negative for typhoid, para A and B. Blood smear showed no malaria. Agglutination for Weil-Felix not obtained. Blood culture negative.

E. B. White, male, age 36, married, laborer. Past history negative except for childhood diseases; had been well all his life. Had a slight chill September 9th, during the night, and the next morning had a severe headache and fever. He kept on working, however, but the following day he felt still worse, and took to his bed that night. He had a temperature of 103, physical examination negative except a slight bronchitic, retinitis, coated tongue, dusky discoloration of the skin, and peculiar odor. Blood count was 5,400 leucocytes; polymorphonuclears 62, lymphocytes 38. Blood pressure 130 over 95. He was given codeine without relief. The next day his temperature was 104. He was restless and complained of pains and aches all over, and vomited everything, including water. His pulse was 100. That evening his rash appeared. For the next week his condition grew worse, his temperature remained high, and his pulse became irregular in rate and rhythm. Heart sounds diminished and first sounds became inaudible. His urine contained many casts, blood, and albumin, but his white counts stayed less than 8,000. His breath and body had a foul odor. Blood pressure dropped to 90 over 65. About the twelfth day of his illness his condition began to improve. His heart became regular and his temperature had wide daily variations. His rash faded. Sweats were exhausting. This lasted about four days and he was afebrile. He lost thirty pounds of weight, but was apparently all right and had regained his weight three weeks later. His blood agglutination was positive in greater dilution

than one to 320 for proteus X<sub>19</sub>. Blood culture negative on the second and eighth days of his illness.

C. M. White, male, age 25, laborer, single. Past history negative except for childhood diseases; he had had typhoid fever nine years previously, and had been vaccinated with triple vaccine against typhoid four years previously. April 10th, had a slight chill while at work, came home and went to bed. April 11th, he woke with a severe headache and fever. His examination at this time: face had a dusky hue, breath peculiar odor, and tongue coated. The next three days his chief complaints were: constipation, headache, bad taste in his mouth, and aching all over. April 15th a rash appeared similar to typhoid rash and lasted about five days, after which it disappeared. His spleen enlarged about the time his rash appeared and disappeared a day or so after his rash. He was not particularly restless during his eruptive stage, but during this stage he had a slight nose bleed. His temperature gradually fell when his rash disappeared, so that he was afebrile by the 13th day. His blood pressure at the beginning of his illness was 120 over 80; at the termination, 90 over 60. His pulse was below 100 and was dicrotic during his eruptive stage. His white blood count stayed below 9,000. His Weil-Felix reaction was positive in dilution greater than one to 320.

H. H. White, male, age 38, fireman. Past history negative except for lead poisoning; he had formerly been a painter. September 3rd he woke with a severe chill, headache and fever. The examination at this time showed a coated tongue, foul breath, conjunctivitis, retinitis, slight bronchitis, and a tenderness over the splenic area. The spleen was not enlarged. The next four days he complained of a bad taste in his mouth, severe headache, pains all over his body, nausea and vomiting. His temperature during this period rose to 105. On the fifth day his rash appeared and stayed until the tenth day, when it disappeared. During this time he was restless, couldn't sleep, took fluids grudgingly, was constipated, and for two nights maniacal, needing restraint to keep him in bed. On the tenth day his temperature began to drop; he had wide daily variations of temperature and sweating was profuse. Weakness during this period was marked. His convalescence was uneventful. He was afebrile on the 15th day of his illness. His agglutination for the Weil-Felix organism

was positive in dilution greater than one to 640. Blood culture was negative.

The case histories and progress of the other cases would be merely a repetition of the cases already cited and therefore are omitted.

Several significant facts were noted in this outbreak:

1—The close relation, clinically, of this fever to typhoid.

2—Vermin were not found in any cases. Mosquitoes were numerous; in some cases where the sick were exposed to mosquitoes others in the same household had the disease, and where mosquitoes were kept away and the patient properly screened only one case occurred in the household.

3—The disease was mostly among laborers and out-of-door workers, especially the men. Twenty-eight cases occurred in men and two in women. There were no deaths.

4—Nephritis was present in all cases. Mycoses in the urine, both voluntarily passed and catheterized, were observed in nearly all cases and were grown on glycerine gelatine in the hanging block preparation. Mycoses were also demonstrated in the stomach washings of one case having a positive Weil-Felix; they were also found in the stool and sputum. Ordinarily the mycoses are found in centrifuged urine which "contained no sediment" and would, in routine work, be thrown away. The clear centrifuged urine should be examined just the same as if it contained sediment, to find the mycoses. Casts were also observed containing mycelial threads and apparently spores. Mycosis is usually found about twelve to twenty-four hours before the urine becomes loaded with casts, but also occurs in the presence of casts and may be found throughout the febrile period. Daily urines were run on all these patients. The type of mycosis found could not be determined, due to the lack of laboratory and hospital facilities.

#### CONCLUSION

Brill's Disease is probably more prevalent than we suspect. It may be transmitted by some type of mosquito as well as by vermin, and have as an intermediate host some rodent. Also, the cause of Brill's Disease may not be the bacillus typhixanthematici nor the Richettsia-Prowazeki, as is supposed, but may be a general systemic infection of some type of mycosis.

Every case of fever suspected of being typhoid, with a negative Widal, should have an agglutination for the Weil-Felix organism.



## TANNIC ACID TREATMENT OF BURNS\*

N. A. BALTZELL, M.D.,

Marianna.

In this, the greatest industrial age of all time, with its consequent disabling injuries, no small percentage of which is due to burns, it is quite an essential economic as well as a humanitarian conception of the subject of the treatment of this horribly painful, disabling, and oftentimes fatal condition, to know that a method has been devised which practically has met with all the requirements of a successful treatment in the majority of cases.

E. C. Davidson began the treatment of burns with tannic acid, and reported twenty-five such cases in 1925. From such experience he concluded: "The preliminary treatment of burns with tannic acid compresses followed by exposure to air, lessens toxemia.

"After coagulation of the devitalized tissues with tannic acid, the application of a wet boric acid dressing apparently causes a return of toxic symptoms. Tannic acid as an initial dressing of a burn is analgesic.

"The subsequent use of the open air method causes minimal trauma, and promotes general comfort. The local astringent effect prevents the loss of body fluids.

"Secondary infection is markedly limited by the absence of a favorable nidus for bacterial growth.

"Scar tissue formation has been less marked than that observed after treatment by other methods.

"The protective layer of coagulated protein forms a scaffold for the growth of young epithelial cells over the denuded surface."

The method of treatment in general as outlined by Davidson is as follows:

"Immediately upon seeing the patient a proper dose of morphine sulphate is given hypodermically to relieve the intense pain.

"The burned surface is covered with sterile gauze dressings, held in place by loosely applied sterile gauze bandages.

"A 2½% aqueous solution of tannic acid is freshly prepared, and dressings are soaked with this solution; applications made every hour. Just here it is to be impressed that a fresh solution of tannic acid only must be used; as it deteriorates upon standing into the far less astringent and efficient gallic acid.

"Dressings are to be inspected at 12, 18, and 24-hour intervals, to observe and prevent any caustic effect if present upon the deeper tissues produced by the applications.

"When a light brown color has appeared on burned surface all dressings are removed; if the removal process meets with an adhering of dressings the solution is used again to assist in loosening them, so as to prevent any further trauma or pain.

"The wound is thereafter left exposed to the air, but is carefully protected from mechanical injury, chilling, or bacterial invasion, by a suitable cradle draped with sterile linen. In the more serious cases, artificial heat is applied, by means of one or more electric light bulbs, placed in the cradle to keep up body heat as well as to hasten the drying process.

"More intimate contact between the burn and the tannic acid solution can be obtained by use of spraying the solution on surface of burn with an atomizer.

"This is done every 30 minutes, until surface becomes brown; blebs are opened as soon as they form, and epidermis is removed as soon as it separates."

It has likewise been suggested more recently by Wilson of Edinburg that a light general anesthesia be given, ether and oxygen preferred, and a thorough cleansing of the burned area carried out; all blisters are opened and evacuated and all epithelium which is loose or raised by blistering must be completely removed in order that the tannic acid solution may come in more direct contact with the burned tissues beneath; it being in this tissue that toxin formation and absorption occurs, and coagulation of it must be secured.

The area is rapidly cleansed by ether, which exerts a drying as well as an aseptic effect, and is especially recommended by him in the handling of all cases of burns that have already been treated with oily mixtures when first seen; for grease will of course prevent effective contact of the watery solution of tannic acid.

With reference to above advised cleansing process, whenever such plan can safely be done, it will be ideal, but I would not recommend in very deep, or otherwise serious burns, involving a very great percentage of body surface, the use of a general anesthesia to procure the results; for we all know the serious amount of shock attendant upon burns, with the already great reduction in body temperature.

\*Read before the Tenth Annual Meeting of the Florida Railway Surgeons' Assn., St. Augustine, April 1, 1929.



In uncomplicated cases the progress of healing advances under cover of protected coagulum layer.

In superficial lesions epithelium covers the raw surface completely in from 10 to 16 days.

In deep lesions the coagulated layer remains firmly attached to the subcutaneous tissue until loosened by the growth of granulations, usually between the 12th and 20th days; the crust should be left until it can readily be peeled up, after which sterile vaseline dressings can be advantageously applied.

Treatment of infected cases, as evidenced by pus formation, is exceedingly rare, and is usually associated with the formation of sloughs in more deeply burned areas. In such cases a collection of pus may float up the coagulum which should then be stripped off; or if persistently adherent, the application of vaseline to crust will facilitate its removal.

In no case should wet dressing be applied to coagulum—only when crust has detached itself or been removed are wet dressings permissible.

#### GENERAL TREATMENT

Symptoms of shock, toxemia, and sepsis, should be treated along general lines.

*Shock.*—Avoid undue exposure to cold. Give hypodermic morphine sulphate to relieve pain and stabilize the nervous system.

Restore normal body temperature, administer fluids by mouth or hypodermoclysis.

*Acute Toxemia.*—This condition comes about as a result of toxins produced by autolysis of proteins in burned area; the coagulation of these proteins by the tannic acid solution, renders them non-absorbable, and is a true prophylactic measure of great worth.

However, when toxemia does occur, it should be treated similarly to shock, but continued longer; fluid administration and the elimination of waste products should be emphasized; hypodermoclysis and fluids by mouth should be forced.

*Septic Wounds.*—These should be treated by removal of coagulum and wound left open, thence treated as any other open granulating surface. The incidence of general sepsis increasing with the depth of burn, the presence of fluid, especially in blisters, and the number of hours before treatment was instituted, is concomitant with early toxemia and should be treated as such.

#### MORTALITY

In Wilson's series of fifty cases of burns treated by the tannic acid method, the death rate

was 8%, with an average of 23% area involvement. Only one death occurred from toxemia, one from shock, two from sepsis and exhaustion. When we consider that the average death rate from acute toxemia in burns is 60%, we can readily appreciate the effect of this treatment.

Bancroft and Rodgers reported 114 cases thus treated with 20% death rate.

My personal experience with the treatment of burns with tannic acid, as outlined, has been limited to 9 cases; six of this series were children; one, 3½ years of age, with 30% involvement died of shock. The others, ranging from 18 months to 16 years of age with an average area involvement of 14% recovered with little or no scarring, all of whom suffered burns of second degree. The most impressive element of the treatment was the very ready relief of pain shortly following application of solution. The remaining three cases were adults; one, a negro, with a 20% burn of second degree, who suffered considerably from a toxemia and afterwards pus, under the coagulum; in all probability due to the fact that he applied at home "carbolic water" to the dried crust. He recovered, but not without more or less scarring of surface.

The remaining two cases, one of whom had a 20% involvement of tissue, healed in three weeks with no scarring or other untoward effects.

The other case was a burn of first and second degree of not more than 10% involvement, and healed readily without complications.

#### SUMMARY

- (1) The outstanding features of this treatment as compared to other forms of treatment are the soothing and analgesic effect as primarily produced by the application of these dressings or sprays.
- (2) The prevention of absorption of toxins into the circulation by the active process of coagulation of damaged tissue, thus rendering these tissue products non-absorbable, and hence the reduction of toxemia to a very marked degree, preserving the body fluids, thus limiting blood concentration.
- (3) Pus formation is usually prevented in superficial burns treated by this method, due to the absence of a favorable nidus for the attack of bacteria; but when pus does form, it occurs so late in the progress of the case, that its general systemic effect is slight.
- (4) Scarring is less evidenced than in other methods of local treatment, due to the pro-

tection extended to the growing epithelium, the reduction of sepsis and the lessened formation of granulation tissue.

- (5) Death rate lowered as a result of less toxemia and generally reduced sepsis.
- (6) In view of the success of this treatment, and its simplicity of application, would recommend its use be extended.

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### VOLKMANN'S CONTRACTURE\*

(ISCHEMIC PARALYSIS)

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 Tampa.

The useless clawhand known as Volkmann's contracture, or ischemic paralysis, is one of the most unfortunate sequelae of fractures or traumas of the forearm.

Volkmann's contracture occurs following fracture of the elbow, forearm and wrist. It is usually caused by the too tight application of bandages or splints. It may be caused by excessive trauma to the soft parts at the time of injury. Prolonged exposure to cold is also said to be a causative factor.

The average general surgeon may not realize how rapidly a grave ischemia may develop, nor is it definitely known. A few hours of constriction, certainly not longer than 6 to 12, may produce most disastrous results. The fact that this complication is relatively rare may cause us to be somewhat negligent in our circumspect observation of the case during the first few hours following the application of bandages, splints or casts.

The method of hyperflexion with the hand supinated, known as the Jones' position, is most commonly used after reduction of supra-condylar fractures. This is an excellent method but the arm should be watched as closely for pain and swelling as though splints had been applied. It must be emphasized that the sole cause of ischemic paralysis is not always the improper use of splints, as the contracture has occurred when no splints or dressings had been used.

The Massachusetts General Hospital reports a case of ischemia following an injury to the forearm in which no constricting dressing had been used—the arm having been allowed to lay on pillows undisturbed.

Recently a Cincinnati surgeon was sued and damages recovered upon the grounds that his negligence in the treatment of a fractured arm was responsible for an ischemic paralysis that followed. In this particular case the arm and dressings had been inspected by the doctor in charge, but the dressings had not been removed, as they were not excessively tight and the pain and swelling not unusual.

Since Volkmann's paralysis most often occurs when the tissues have been traumatized and kept under tension, the etiology according to Scudder may be summed up and expressed thus: "The contracture is the result of prolonged interference with the normal circulation."

The damage to the muscle may be very slight; it may be complete, or it may be of any grade between these two extremes, and it is impossible to determine clinically at an early time the extent of the damage.

Leser has demonstrated experimentally that shutting off the arterial supply of an extremity resulted in flaccid paralysis of the muscles. On the other hand he demonstrated on dogs that a tight bandage on one of the extremities, without previous injury to nerve or artery, would cause, after five or six hours, a rigidity of muscles with loss of function quite comparable to the condition under discussion. At the end of five or six hours, if the bandages were removed and the dog allowed to run free, complete recovery quickly ensued. If, however, the compression was removed, but the dog prevented from using the extremity, loss of function and contracture developed steadily to full degree.

Experimental work and clinical observation point to traumatic myositis as the fundamental condition in causing Volkmann's ischemic contracture.

The external or internal pressure of the injured arm interferes with the circulation causing a venous congestion which secondarily raises the capillary pressure producing hemorrhage and edema in the muscle fibers. Muscle degeneration follows, with connective tissue replacement as the end result. In this fibrous cicatricial mass may be tendons, fascia, nerves and muscle remnant.

\*Read before the Tenth Annual Meeting of the Florida Railway Surgeons' Assn., St. Augustine, April 1, 1929.

Nerve injury is generally a complication and occurs in about 60 per cent of cases. Primary nerve injury may be the result of the accident and may involve one or all of the nerves partially or completely. The ulnar and median are the nerves usually involved, the musculo-spiral escaping. The complications may be secondary; and by far the greater part of the 60 per cent belong in this class. Nerve manifestations may occur early as a result of the swollen muscles, or more frequently, later as the result of cicatricial constriction. Interference with function is usually only partial but may be complete.

The symptoms of Volkmann's ischemia vary with the progress of the contracture and may be so insidious in the beginning as to escape the attention of the doctor, family or nurse. The pain may or may not be severe and may be looked upon by all concerned as the usual pain expected in fractures and therefore the dressings may not be removed or even examined. The degree of pain, swelling, discoloration, anesthesia, and deformity depend upon the group of muscles, nerves and blood vessels involved in the constriction. In twenty-four to forty-eight hours vesications may appear on the arm at the points of greatest pressure; the fingers become swollen, discolored and numb. On examination of the muscles there is a board-like hardness, and any attempt to extend the fingers causes intense pain. When this stage is reached ischemia is well established with the characteristic clawhand, and the only period in which successful measures might have been used to prevent ischemic paralysis has passed.

In considering the treatment of Volkmann's contracture it must be remembered that this condition is obviously many times the fault of the surgeon and therefore the prophylactic treatment is of the utmost importance. First ischemia should be differentiated from anterior poliomyelitis, peripheral nerve paralysis, and Little's disease.

Before proceeding with active treatment it is necessary to determine the length of time the contraction has existed and the extent of nerve injury and muscle destruction. This data will determine the type of treatment. In cases of several months' duration when the paralysis has reached its maximum, little improvement can be accomplished without operative procedure. If the case is seen within a week or two good results are obtained by daily massage and muscle-

stretching. Massage should be carried out with great care. There should be no undue force used to cause pain or subsequent soreness or swelling. Massage should be given twice daily and continued for a period of months or possibly a year or two. Hydro- and electro-therapy may be beneficial and may be used in conjunction with massage.

The muscle and tendon-stretching requires great care and judgment and should *never* be done while the patient is under an anesthetic. Any extreme measures instituted in this course of the treatment will defeat its purpose. Great harm may be done by over-enthusiastic masseurs. The manipulation of an ischemic arm must be carefully supervised by the surgeon. One of the best methods of tendon and muscle-stretching is by the daily application of the banjo splint. This can be applied and the tension so regulated that it is possible for the patient to wear it all day, or during the entire night without disturbing his rest. If the tension exerted is sufficient to cause pain and discoloration of the parts it is too great.

If the intelligent and prolonged non-operative treatment fails to show satisfactory improvement then operative means must be considered. However, no case should be operated upon before the contracture has reached its maximum.

There are several operative procedures suggested to improve this condition: (1) sufficient lengthening of the contracted flexor tendons of the forearm to allow full extension of the fingers with the wrist extended; (2) neurolysis with the transplantation of the nerves to subcutaneous tissues; (3) myotomy and tenotomy as required; (4) shortening the ulna and radius by resection and the removal of a portion of each sufficient to allow full extension of the fingers when the hand is extended.

The results following these various operative methods have in many instances been very satisfactory.

#### CONCLUSION

Pain and swelling developing in a few hours after the application of splints to a fractured arm is a warning signal. If the pain and swelling is not relieved at once, the deplorable complication of ischemic paralysis may be the result.

The preventive treatment is most important and this fact cannot be stated too emphatically. Remove all dressings as soon as pain and swelling occur and temporarily disregard the fracture.



HEMORRHAGE OF OVARIAN ORIGIN—  
CASE REPORT\*GEORGE FREDERICK OETJEN, M.D.,  
Jacksonville.

The case of ovarian hemorrhage reported at the last meeting of this Society, prompts me to relate a case complicated by acute appendicitis, that recently came under my care.

A young, unmarried white girl, aged 16, who had been in good health, was seized with violent cramp-like pain in the hypogastrium and right iliac fossa, associated with nausea and vomiting. Her menstrual periods had previously been of irregular occurrence, and accompanied by much pain and followed by short periods of amenorrhea.

The pulse was 110, and the temperature 98 degrees. The entire abdomen was tender to palpation with moderate rigidity of the right rectus muscle. The percussion note was tympanitic over the right lateral abdominal region and flat over the left inguinal region. White blood count was 14,600 and polys. 85%. Clinical examination led to a diagnosis of appendicitis.

A right rectus incision was made. On opening the peritoneum free blood escaped and altered blood of a thicker consistency and large clots filled the pelvic region. About 500 cc. of blood was revealed, the left ovary proving the source. The left ovary was about 2½ inches in diameter, cystic, engorged, and ruptured across its center. The left fallopian tube was congested and had several small cysts attached. The appendix was acutely inflamed and contained three fecaliths. The left tube and ovary were removed together with the appendix. Before final closure of the abdomen, the right adnexal region was examined, and the right ovary was found to be slightly cystic but otherwise normal. The menses appeared on the second post-operative day. Convalescence was uneventful and patient left the hospital on the twelfth day.

On the 14th post-operative day patient complained of pain in left thigh and swelling of left ankle. Examination revealed tenderness to palpation over the left femoral vein and slight swelling of the left ankle. The pulse was 100 and the temperature 100 degrees. A diagnosis of left femoral phlebitis was made. After four days of

rest in bed with elevation of the left leg, the temperature returned to normal, the swelling disappeared and patient was free of pain. After a week of normal temperature, patient resumed her duties at school and at present is apparently completely cured.

## BRACHIAL PLEXUS ANESTHESIA

I. M. HAY, M.D.,  
Melbourne.

For operative work on the upper extremity, especially the reduction of fractures and dislocations, the brachial block of Kulenkamff should be carefully considered in the choice of an anesthetic.

The advantages of this type of procedure are numerous; it possesses all the advantages of a local over a general anesthetic; it gives complete relaxation through paralysis as well as anesthesia; infection is not spread, as the needle does not enter the infected area; in the reduction of fractures and dislocations one can do very well without an assistant and there is sufficient time to set and reset bony fragments with X-ray check by plates between operations.

The disadvantages are those usual with local anesthesia, especially in reference to the nervous type of patient who develops a considerable degree of reaction as he witnesses the preparation and the induction of the anesthesia; however, the relaxation, absent in many forms of local anesthesia, is present in this type of block. In certain instances of minor manipulation a general anesthetic is time saving; also, there are certain technical dangers of penetration which will be considered in the description of the technique.

Induction of brachial anesthesia by the route now most generally used, and by all odds the most practical, was first done by D. Kulenkamff, on himself as a subject. Hirschel attempted to produce anesthesia via the axillary route, but the method was too dubious in results to gain popularity. Mulley, Perthes, Hohmeier and Capelle have devised divers routes of injection, none of which seem to have the practical value and simplicity of the Kulenkamff route.

## TECHNIQUE

One should acquaint himself thoroughly with the anatomical relations of the brachial plexus, especially in its relation to the lower end of the subclavian and the upper portion of the axillary

\*Read before the Duval County Medical Society, Jacksonville, March 6, 1929.

arteries, for this point is the key to the successful use of the procedure. The outer side of the subclavian artery at a point where it passes from palpability under the clavicle is located. This point will be found to be almost exactly equidistant from the sternal and acromial ends of the clavicle and just lateral to the external jugular vein. Here a wheal is raised with an ordinary "hypo" syringe and needle, intra-dermally. Now a longer still fine needle is introduced through the point decided upon, as close to the artery as is possible without entering the same. It is directed from the point of entry in a line with the tip of the spine of the third dorsal vertebra. As the needle penetrates the plexus the patient experiences a twinge similar to a rap on the "crazy bone", which is the "green light" in this procedure. If, however, the needle proceeds further it generally is halted by the first rib, or it may enter the artery, a fact testified to by the appearance of bright blood; in either instance the needle should be withdrawn to the skin and a new start made, varying the direction according to indications. When the typical sensation in the hand and forearm is elicited, one proceeds with the injection. This consists of about 20 cc. of a 2% solution of novocain with adrenalin added, the amount varying somewhat with the case at hand. An especially important point in the injection is to warn the patient not to jump or move during the process, for if a small amount of solution be injected into the plexus the sensation of the patient to the needle is lost, making it next to impossible to relocate the plexus, after being dislodged by motion or jerking. After satisfactory injection, one should wait 15 to 20 minutes for the induction of the anesthesia. This time is ordinarily consumed in preparing for the operation to be performed, the anesthetic being given very early in the procedure.

To summarize the procedure: (1) point of introduction of needle—close to the lateral side of the subclavian artery, where it disappears under the clavicle; (2) direction of needle—toward the tip of the third dorsal spine; (3) injection made when the paraesthesia is definitely noted by the patient.

#### DANGERS

Certain vaso-motor reactions in the arm, forearm and hand occasionally occur, none of which are permanent. Kulenkamff has never seen a case of paralysis resulting from the injection of

the brachial plexus with novocain. It is quite possible to enter the subclavian artery. This is told by the sense of resistance as the needle penetrates the wall followed by the appearance of blood. In this case the needle is withdrawn and redirected. The injection of novocain into the jugular vein would constitute a more serious accident due to the proximity of the heart and the direction of the blood flow. The lung may be entered, which, in a normal subject, is of no consequence. However, this accident may assume serious proportions in the emphysematous or otherwise diseased lungs. In one of our cases the error progressed so far that about 1 cc. of novocain solution was injected, accompanied, or followed, by a violent paroxysm of coughing which after about ten or fifteen minutes subsided, and there have been no further symptoms. This error will not occur with experience in the method.

#### COMMENT

Inasmuch as I have come to regard the block as office procedure, I do not have complete records on all cases thus treated. The last six hospital cases show an entirely satisfactory anesthesia. It is not possible to obtain the complete paralysis with each attempt, at least in my experience. However, the degree of anesthesia is ample and the patient is comfortable even without motor paralysis. In some of the earlier cases failure was encountered more often from motion on the part of the patient than from any other cause. In other instances a slight tingle was taken to represent the full paræsthesia and injection made inaccurately—this point is one in which the temperament of the patient must be taken into consideration. The only complication of note I have run across is the one already referred to—of penetrating the lung. The results are increasingly satisfactory with experience gained in its usage.

#### CONCLUSION

It is urged that the profession give more attention to this simple effective form of anesthesia of the upper extremity, which is especially useful away from the larger medical centers where aid and perfect general anesthetics are not readily available.

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## THE ILLUSTRATING OF ORIGINAL ARTICLES

Contributors of original articles to the Journal are asked, wherever possible, to illustrate their articles. This adds greatly to the interest of any scientific dissertation. In order to stimulate this phase of the Journal work, the Executive Committee of the Association has recently approved a plan whereby the Journal will bear fifty per cent of the cost of making electrotypes, provided the placing of orders for the plates is left in the hands of the business office of the Association, and provided that the cost in connection with the plates for original articles shall not exceed an amount to be approved by the editor. This should serve as a stimulus to our members in illustrating their articles, and it is hoped that both the contributors and readers of the Journal will benefit by such an arrangement.



## INFANT MORTALITY

Who is to be congratulated for the new state record just set up? Last year all previous records were broken in that the infant mortality rate of 67 was the lowest ever recorded in this state. Tabulations have just been completed for deaths of infants under one year of age per thousand living births recorded for the calendar year 1928 which reveal that even 1927, which broke all records, did not show an infant mortality rate as low.

Last year the infant mortality rate in this state was 67 as compared with 68 for the previous year. While this is a very small reduction, it is, nevertheless, an accomplishment since it represents the lowest infant mortality rate ever recorded for Florida since state-wide records have been available which cover a period from 1917 to 1928, inclusive.

Deaths under 1 year and infant mortality rates, by color, 1917 to 1928, inclusive:

Year	Rate	White	Colored
1928.....	67	54	96
1927.....	68	56	95
1926.....	75	62	108
1925.....	74	61	104
1924.....	82	70	107
1923.....	78	65	106
1922.....	77	65	104
1921.....	80	66	112
1920.....	94	76	134
1919.....	89	72	126
1918.....	107	91	145
1917.....	106	86	155

While it is pleasant to enjoy the realization of certain victories and achievements in the protection of lives of babies in our state, we must not forget that it is a constant fight and our best efforts are challenged if the unnecessary loss of life is to be curtailed.

There is a marked improvement in the infant mortality from several causes. For instance, whooping cough shows a total of 25 deaths as compared with 44 for the previous year; dysentery shows 10 deaths last year as compared with 23 for the previous year; tetanus, 13 deaths last year as compared with 26 for the previous year; diarrhea and enteritis, 191 deaths last year as compared with 324 for the previous year.

## STATE NEWS ITEMS

The following letter has been received from the registrar of the Southern Pediatric Seminar, to be held in Saluda, North Carolina, July 29th to August 10th, inclusive: "The Southern Pediatric Seminar, which is a post-graduate course of two weeks held at Saluda, N. C., each summer, is fortunate enough to have seven scholarships to give to men in your state. This scholarship carries with it tuition and board for the two weeks. We are anxious to get these scholarships filled as soon as possible and would appreciate any publicity you could give it to the doctors in your state. We prefer doctors who live in small towns to take these scholarships."

Those members of the Association desiring scholarships are asked to forward their communications to the office of the secretary in order that they may be placed in the hands of the Executive Committee for consideration.

\* \* \*

A meeting was called by Dr. H. C. Dozier, president, through the officers, councilors, and presidents of the county medical societies, concerning the Basic Science Bill. This meeting was held May 12th at the Hotel Marion, Ocala.

\* \* \*

Dr. G. F. Oetjen of Jacksonville is spending three months in Germany doing post-graduate work.

\* \* \*

Dr. and Mrs. H. Mason Smith of Tampa have moved from 2602 Sunset drive to their new home on Prospect road.

\* \* \*

Miss Jane Elam Gills of Lynchburg, Virginia, and Dr. John E. Maines, Jr., of Gainesville, were married on May 4th. Dr. Maines was formerly surgeon at the Duval County Hospital, but for the past year has been practicing in Gainesville. Miss Gills has been chief surgical supervisor at the Duval County Hospital, Jacksonville.

\* \* \*

Dr. Percy L. Dodge of Miami is recovering from a severe attack of cold and arthritis at the Mount Alto Hospital, Washington, D. C.

\* \* \*

Dr. Henry Hanson has resigned as district medical officer for western Florida, it was recently announced by Dr. F. A. Brink, director of the Bureau of Communicable Diseases of the State Board of Health. Dr. Hanson is to assume the direction of sanitation activities of the City Board of Health, Jacksonville.

Dr. Daniel C. Main, formerly of Pomona, has recently located at Crescent City.

\* \* \*

Dr. John D. Milton announces the removal of his offices from 306 Exchange Building to 905 Huntington Building, Miami.

\* \* \*

There has recently been installed in the office of the secretary, editor and business manager of the Association a telephone which is listed in the Jacksonville telephone directory under the heading of "Florida Medical Association." The number of the 'phone is 5-4675. In placing your long-distance calls for this office, a small saving will be made by calling "5-4675" rather than "Florida Medical Association."

\* \* \*

Dr. Ferdinand Richards announces the removal of his offices to 309-12 Wade Building, Jacksonville. Practice is limited to gynecology and obstetrics.

\* \* \*

Dr. John A. Beals, formerly of Jacksonville, has opened offices in the Medical Arts Building, Chattanooga, Tennessee.

\* \* \*

The members of the Suwannee County Medical Society held their April meeting in Madison. Dr. John E. Boyd and Dr. William McL. Shaw of Jacksonville were guests of the Society. Dr. Boyd read a paper entitled "Twenty Odd Cases of Surgical Pathology of the Stomach and Duodenum and the Surgical Treatment Applied" (with lantern slides). Dr. Shaw discussed the X-ray studies of these cases.

\* \* \*

The Tuberculosis Association of Duval County has been carrying on an active educational campaign in the public schools. Drs. Louie Limbaugh, Noble Upchurch, M. B. Herlong, James D. Pasco, F. A. Brink and W. W. Kirk have addressed the students of many of the schools in the county on this subject.

\* \* \*

Dr. G. J. Hastings, for many years Medical Officer of Health, Toronto, Canada, recently visited Dr. B. L. Arms, State Health Officer, Jacksonville.

\* \* \*

Dr. H. F. Watt and family of Ocala are making arrangements for a two months' stay in Europe. They expect to leave on or about July 1.

## CHARLES W. BARTLETT

In the death of Dr. Charles W. Bartlett the state has lost one of the ablest sanitary authorities of the South.

He was born in Sagua La Grande, Cuba, April 26, 1870, and died in Tampa May 29, 1929. His father was an American, his maternal grandparents were Spanish and Cuban.

He was sent to the United States at the age of 15 to receive an American education. He studied medicine at the University of Maryland and graduated in 1893. After serving one year as interne to the hospital, he went to Cuba to study yellow fever and tropical diseases, after which he came to Tampa in 1895.

When the Spanish-American War broke out he went to Cuba with the American Army and for two and a half years remained under General Gorgas to supervise sanitation. On returning to the United States he was made Port Sanitary Inspector of Tampa Bay harbor, and later, Assistant State Health Officer. In 1906 he was made a member of the Board of Public Works, in which capacity he served for nearly ten years without pay. In 1927 he was elected a city commissioner. In 1928 he was appointed City Health Officer, which office he held at the time of his death.

Dr. Bartlett was a Mason, having been re-elected eight times as Master of his (Universal No. 178—Spanish) Lodge, a Shriner, Woodman, an Elk, and Kiwanian, a member of the Unitarian church.

Four years ago he suffered a severe, prolonged heart attack which came near carrying him off. This last attack came on suddenly. He realized that he was dying, and said a few minutes before the end: "This is death; it is not so bad."

His mother, age 78, still lives in Cuba. He leaves a wife, five grown children and three grandchildren.

His son, Dr. Chas. W. Bartlett, Jr., city physician, has been appointed by Mayor McKay to continue the work of his father.

Dr. Bartlett was a very affectionate, gentle character, a devoted, faithful friend, a deep student, a conscientious worker.

The whole State of Florida owes to him, to Leslie W. Weedon and to Joseph Y. Porter an everlasting debt of gratitude for their services in keeping yellow fever out of Florida.

The Catholic Daughters' Home of St. Augustine was recently filled with friends of the East Coast Hospital and of the nurses to enjoy the program in honor of the graduates of 1929, Miss Eleanor Stead and Miss Lillian Hoskins. An interesting program was carried out with Dr. G. Walter Potter acting as master of ceremonies. Following the invocation by Rev. A. E. Calkins, a most enjoyable musical program was enjoyed. The address to the graduates was by Hon. E. Noble Calhoun; Dr. W. E. Burnett, acting chief surgeon of the hospital, presented the diplomas.

(Continued on page 610)

**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,**

of The Journal of the Florida Medical Association, Inc., published monthly at Jacksonville, Florida, for April 1, 1929. State of Florida, County of Duval.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Shaler Richardson, M.D., who, having been duly sworn according to law, deposes and says that he is the editor of the Journal of the Florida Medical Association, Inc., and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business manager are:  
Publisher, Florida Medical Association, Inc., Box 81, Jacksonville, Fla.

Editor, Shaler Richardson, M.D., Box 81, Jacksonville, Fla.  
Managing Editor, none.

Business Manager, Stewart G. Thompson, D.P.H., Box 81, Jacksonville, Fla.

2. That the owner is: (If owned by a corporation, its address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given).

Florida Medical Association, Inc. (A corporation not for profit—no stockholders).

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is.....XX.....

(This information is required from daily publications only).

THE JOURNAL OF THE FLORIDA  
MEDICAL ASSOCIATION, INC.

By SHALER RICHARDSON, Editor.

Sworn to and subscribed before me this 12th day of April, 1929.

S. G. THOMPSON,

Notary Public State of Florida at Large.

(My Commission expires April 9, 1932).

(Seal)

Form 3526.—Ed. 1924.

Note. This statement must be made in duplicate and both copies delivered by the publisher to the postmaster, who shall send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office. The publisher must publish a copy of this statement in the second issued printed next after its filing.

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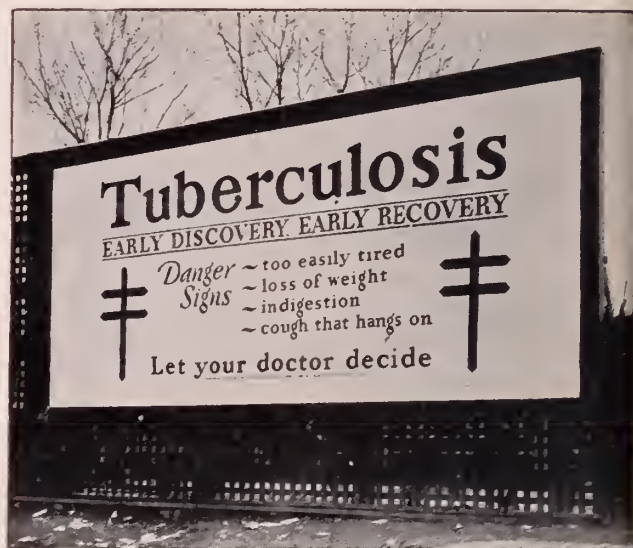
## TUBERCULOSIS ABSTRACTS

A REVIEW FOR PHYSICIANS

ISSUED MONTHLY BY THE

NATIONAL TUBERCULOSIS ASSOCIATION

Stephen A. Douglass, who has back of him a long record of service as a clinician specializing in tuberculosis and who is now superintendent of Sunnyside Sanatorium at Indianapolis, contributes this number. As a sanatorium physician, he has observed that, while diagnoses of tuberculosis are being made by general practitioners more promptly than in the beginning of his career, too few cases are discovered while yet in the "minimal" stage. The majority of patients admitted to sanatoria or sent to distant health resorts are in the "advanced" stage. Failure to discover the disease early is, in his opinion, the chief factor in compelling an unfavorable prognosis.



Billboard poster listing danger signs, used during Early Diagnosis Campaign, April, 1929.

## SYMPTOMATOLOGY OF TUBERCULOSIS

Morton, two hundred years ago, speaking of tuberculosis, said: "There is no other malady which assumes so many protean forms and which is attended by such diversified symptoms and complications." The incipency of the disease is often manifested only by a train of vague symptoms, sometimes extending over a long period of time. A painstaking consideration of these early symptoms, with a view of accounting for their origin, together with the evidence elicited by



physical examination, often establish an early diagnosis.

Sanatorium experience shows that careful study of the patient has frequently been omitted, that the examinations had not been complete, and that important aspects of the history were overlooked even when the symptoms are those commonly observed in pulmonary tuberculosis. Sanatorium physicians frequently see patients in whose lungs little or nothing is found on physical examination but who constitutionally show clear and definite evidence of tuberculous disease as proved by the subsequent course of events. Dependence upon the physical findings and the sputum report alone will usually defeat a timely diagnosis.

#### SYMPTOMS, LOCAL AND GENERAL

Many diseases have a typical onset. The diagnosis of lobar pneumonia, for example, can frequently be made with a fair degree of certainty from a few key symptoms. But in the case of pulmonary tuberculosis, this is impossible; there is probably no other disease which may begin in such widely divergent ways or which presents such a variable symptom-complex. The reason for this is that the symptoms of pulmonary tuberculosis are both local, having their origin in the respiratory organs, and general, due to the effects of the disease on the system as a whole. The onset may be characterized by the exaggeration of any one of the many possible symptoms. Because there is no typical mode of onset, we must be on the lookout for pulmonary tuberculosis in patients who consult us for symptoms which frequently seem to have no apparent connection with the lungs.

For many years, it has been taught that the pathognomonic group of symptoms that spell pulmonary tuberculosis were cough, expectoration with bacilli, hemoptysis, fever, chills, night sweats, fatigue, and loss of weight. But by the time such classical symptoms present themselves, the local lesion is often moderately advanced, or advanced. Early and favorable cases present few of these symptoms. By this time, of course, a definite and conclusive diagnosis can be made; it demands little diagnostic skill and it comes too late for the patient to receive the maximum benefits that he should derive from modern means of

treatment. A clinical recovery at this time may sometimes be attained, but the "cure" is likely to fall short of complete restoration of function and full working capacity. The symptom group or complex which we were taught as indicating early tuberculosis is now interpreted as meaning in a large measure advanced tuberculosis.

#### ONSET USUALLY GRADUAL

In the majority of cases, pulmonary tuberculosis develops slowly and the onset is gradual, so that it is impossible to determine the exact date at which the patient first noticed that he was ill. Even in those patients in whom some one symptom has developed suddenly, careful questioning will frequently reveal a preceding period of in-



Scene from motion picture, "Consequences" for lay audiences.

definite malaise or slight cough which has passed unnoticed. While this slow and gradual onset is characteristic for the majority of cases, it occasionally happens that the onset is sudden and acute, the symptoms appearing without warning in a previously apparently healthy individual.

Pottenger states that, if a careful history of all patients who are suffering from the early symptoms of tuberculosis were taken and carefully appraised, the disease would be suspected in almost all, for in nearly every instance there is a history of one or more of the following symptoms: malaise, loss of strength and endurance, altered appetite, decline in weight, increasing nervousness, vague pains throughout the chest, acute pleural pains, slight tendency to cough or to become short of breath on exertion, repeated "colds" or the spitting of blood. These symptoms should invariably direct attention to the

chest. If, in addition, there are a slight rise in temperature and a pulse easily affected by exertion, tuberculosis should be ruled out before any other diagnosis is made. He concludes that the "most important point in the diagnosis of tuberculosis is to know when to suspect it."

#### DIAGNOSIS OFTEN DELAYED

It has been shown that patients present themselves to their physician with definite complaints two to twelve months before they are diagnosed as having pulmonary tuberculosis. The complaints are apparently not significant enough to warrant a diagnosis of any disease and the patient is many times treated symptomatically for conditions such as bronchitis, influenza, colds, pleurisy, unresolved pneumonia, nervous breakdown, nervousness, thyroid disease, "spots" on lung, throat trouble, asthma, anemia, catarrh, laryngitis, intercostal neuralgia, ulcer of stomach, gastritis, weak lungs, "cigarette" cough, stomach cough, neurasthenia, sinusitis, "female" trouble and "heart trouble."

To stamp a person as actively tuberculous is a grave matter; to advise such a person to give up his work, to leave his home and family, if home conditions are unsuitable or unsatisfactory for treatment, and to go to a sanatorium or distant health resort is a serious matter. On the other hand, failure to recognize and treat tuberculosis in the early or incipient stage usually spells tragedy.

S. A. D.

#### INFORMING THE PUBLIC

The skill of the physician in diagnosing tuberculosis early is of little avail unless the patients present themselves early. A special study of 1,499 sanatorium patients made by the National Tuberculosis Association showed that about 57 per cent did not consult a physician until at least one month had elapsed from the time the first symptom appeared. This corroborates the general observation that patients delay too long before seeking medical advice. To help correct this failing, tuberculosis associations endeavor to acquaint the general public with the early danger signs of the disease. This is done by means of pamphlets, newspaper articles, posters, lectures, and motion pictures. Results of such educational campaigns show that many people are stimulated by them to "let the doctor decide" whether or not the symptoms they have experienced indicate tuberculosis.

—Ed.

(This review secured by the Florida Public Health Association from the National Tuberculosis Association.)

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COUNTY SOCIETY	SECRETARY	MEETINGS				Dues Paid.
		Date	Time	Place	Luncheon?	
Alachua .....	J. E. Maines, Jr., M.D., Gainesville.	2nd Tuesday	12:00 Noon	White House	Yes.	88%
Bay .....	J. M. Whitfield, M.D., Panama City.					55%
Brevard .....	I. K. Hicks, M.D., Melbourne.	Varies		Varies		69%
Broward .....	Ralph Lingeman, M.D., Ft. Lauderdale.	2nd Tuesday	8:00 P.M.	Chamber of Com- merce	No.	55%
Columbia.....	T. W. Witt, M.D., Lake City.	1st Monday.	7:30 P.M.	Blanche Hotel		100%
Dade .....	R. M. Harris, M.D., Miami.	1st Friday	8:30 P.M.	Miami City Club	Occasionally.	59%
DeSoto-Hardee- Highlands ...	M. A. Hubert, M.D., Avon Park.		8:00 P.M.	Varies	No.	93%
Duval .....	Kenneth A. Morris, M.D., Jacksonville.	1st Tuesday	8:15 P.M.	Duval County Hospital	No.	86%
Escambia .....	J. D. Bell, M.D., Pensacola.	1st Tuesday	8:00 P.M.	Board of Health Building	No.	71%
Hamilton .....	R. A. Barnett, M.D., White Springs.					100%
Hillsboro .....	Frank T. Barker, M.D., Tampa.	1st and 3rd Tues- days	8:00 P.M.	City Hall	No.	69%
Jackson .....	C. H. Harrison, M.D., Cottondale.	2nd Tuesday	3:00 P.M.	Marianna	No.	53%
Lake .....	W. L. Ashton, M.D., Umatilla.	1st Thursday	12:30 P.M.	Eustis	Yes	93%
Lee .....	H. Quillian Jones, M.D., Ft. Myers.	3rd Friday	7:30 P.M.	Lee Memorial Hospital	No.	80%
Leon-Gadsden- Liberty- Wakulla- Jefferson .....	F. Clifton Moor, M.D., Tallahassee.	Quarterly	3:00 P.M.	Varies	Yes.	71%
Madison .....	Geo. O. Davis, M.D., Madison.					100%
Manatee .....	J. M. Davis, M.D., Bradenton.	1st and 3rd Tues. Oct. to May; 2nd Tues. May to Oct.	7:00 P.M.	Dixie Grande Hotel	Yes.	79%
Marion .....	Thos. H. Wallis, M.D., Ocala.	3rd Thursday	12:30 P.M.	Harrington Hotel	Yes.	95%
Monroe .....	W. R. Warren, M.D., Key West.	1st Sunday	9:00 P.M.	Varies	Yes.	100%
Orange .....	J. R. Chappell, M.D., Orlando.	3rd Wednesday	8:30 P.M.	Varies	No.	80%
Palm Beach ...	R. G. Lewis, M.D., W. Palm Beach.	2nd Monday	8:00 P.M.	Court House	Yes.	90%
Pasco- Hernando- Citrus.....	Geo. R. Creekmore, M. D., Brooksville.	2nd Thursday	7:00 P.M.	Varies	Yes.	100%
Pinellas .....	O. O. Feaster, M.D., St. Petersburg.	Every other Friday	8:00 P.M.	500 Power & Light Bldg.	No.	96%
Polk .....	Herman Watson, M.D., Lakeland.	2nd Wednesday in Feb., Apr., June, Aug., Oct., Dec.	1:00 P.M.	Lakeland	Yes.	68%
Putnam .....	E. W. Warren, M.D., Palatka.	2nd Thursday	7:00 P.M.	James Hotel, Palatka	Yes.	75%
St. Johns .....	W. E. Burnett, M.D., St. Augustine.	3rd Tuesday	8:30 P.M.	Varies	Yes.	100%
St. Lucie-Okeech- bee-Indian River-Martin ..	C. L. Davis, M.D., Okeechobee.					64%
Sarasota .....	F. Metzger, M.D., Sarasota.	2nd Tuesday	8:30 P.M.	Varies	Occasionally.	77%
Seminole .....	J. T. Denton, M.D., Sanford.	2nd Friday	8:00 P.M.	City Hospital		83%
Sumter .....	W. E. Mitchell, M.D., Coleman.	2nd Tuesday		Varies	No.	60%
Suwannee ....	W. C. White, M.D., Live Oak.					86%
Taylor .....	R. J. Greene, M.D., Perry.	Last Thursday	12:15 P.M.	Eldorado Cafe	Yes.	100%
Volusia .....	J. Ralston Wells, M.D., Daytona Beach.	2nd Tuesday	7:30 P.M.	Varies	Yes.	87%
Walton- Okaloosa ....	A. G. Williams, M.D., Lakewood.	3rd Thursday	8:00 P.M.	Varies	Occasionally.	100%
Washington- Holmes .....	W. C. Harper, M.D., Chipley.					100%

NOTE—(Secretaries: Please submit information to complete the above schedule.)



(Continued from page 606)

The Hillsboro County Medical Society voted at a recent meeting to sponsor a series of health lectures by its members before parent-teacher associations, women's clubs and similar organizations during the summer.

\* \* \*

The Executive Committee of the Florida Medical Association recently held a meeting in Jacksonville. Those present were Dr. Gerry R. Holden, chairman; Dr. M. A. Lischkoff, Pensacola, and Dr. E. W. Warren, Palatka. Dr. Shaler Richardson, secretary-treasurer, and Dr. Stewart G. Thompson, business manager of the Association, were also present.

\* \* \*

Doctors Jas. L. Estes and A. B. Jones of Tampa recently attended clinics at the Emory University School of Medicine, Atlanta, Ga.

\* \* \*

Dr. W. Cooper Myers announces the removal of his offices from 2023½ Seventh Avenue, to Room 302, Schulte-United Building, 305 Cass Street, Tampa.

\* \* \*

Dr. A. F. Thomas of Titusville is at present located at 7 Seven Pines Avenue, Somerville, Mass.

## INDEX

### A

Adenomyomas .....	157
Analgesia, Synergistic, in Labor .....	200
Anesthesia, Brachial Plexus .....	601
Anesthesia, Gas .....	243
Aneurism of the Thoracic Aorta, Case Report.....	35
Aorta, Thoracic-Aneurism of (Case Report) .....	35
Artificial Feeding of Infants Under One Year of Age .....	294
Asthenia in Southern Florida, Personal Observation on Certain Cases .....	149

### B

Belfield's Operation .....	302
Biliary Tract, Nonsurgical Treatment of Infections of .....	74
Blood Transfusion, Use and Abuse of .....	21
Bowel, Lamed .....	250
Bowel, Large, A Consideration of Some Surgical Lesions of .....	24
Brachial Plexus Anesthesia .....	601
Brill's Disease .....	594
Bronchoscopy as an Aid in Diagnosing and Treating Intratracheal and Bronchial Conditions .....	246
Burns, Tannic Acid Treatment of .....	597

### C

Cancer, Lung, with Report of Three Cases .....	83
Cancer, Remarks on—with Case Report of Colloid Cancer of Transverse Colon .....	396
Cesarean Section, Type of Operation Indicated....	78
Cesarean Section with a Review of Twenty-one Cases .....	100

(Continued on page 612)

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Chronic Endocervicitis .....	547
Congenital and Acquired Heart Conditions in Childhood .....	156
Councilors' Reports .....	455
Cystectomy, Total-Report of Case .....	439

## D

Dental Caries, Some Etiological Factors of .....	212
Dentistry and Medicine, A Conception of Today's Relationship .....	33
Diarrhea Caused by <i>Lambliia Intestinalis</i> —With Re- port of a Case .....	209
Diseases of the Heart .....	248
Diseases of Urinary Tract, Modern Diagnosis of ..	392
Double Pregnancy—One in Utero and One in Right Tube .....	255
Duodenal Lesions, Roentgen Observation of .....	129
Duodenal Ulcer, Surgical Treatment of .....	16

## E

Editorials:	
Annual Meeting, The .....	259
Annual Meeting of American College of Sur- geons .....	162
Capital Investment in Medicine .....	352
Causes of Sickness Among Males and Females at different Ages .....	161
Cholecystography .....	103
Contributors to the Journal, Some Points for ....	38
Doctors' Annual Registration .....	39
Early Diagnosis of Tuberculosis .....	510
Effects of Climate .....	310
Gorgas Memorial .....	215
House of Delegates .....	455
Illustrating of Original Articles .....	603
Increase in Representation in House of Delegates of American Medical Association .....	160
Increase in Size of Journal .....	161
Infant Mortality .....	604
Membership Roster, Florida Medical Association, 1928 .....	406
Message from President, Henry C. Dozier, M.D. ....	510
Our Guests are Coming .....	309
Our Next Scientific Program .....	161
Our President .....	509
Pellagra in Man and Black Tongue in Dogs Found to Be Due to Similar Cause .....	260
Preventable Deaths .....	558
Registration, Doctors' Annual .....	39
St. Augustine Meeting .....	454
Some Points for Contributors to the Journal .....	38
State Dues .....	352
State Health Department Meets the Emergency ..	214
Technical Exhibit .....	403
Electro-Enucleating Tonsillotomy, Instrumentation and Operative Technique, With Post-Operative Results .....	71
Endocervicitis, Chronic .....	547
Examination of 255 Pre-School Children of Tampa, A Record of .....	350
External Otitis, A Study of .....	142

## F

Fibroids, Uterine, Associated with Hemorrhage— Some Experiences in the Treatment with X-ray ..	254
Fractures of the Skull .....	585
Fractures of the Upper and Lower Jaw and Their Correction with the Dental Splint .....	207
Fractures of the Spine .....	145

## G

Gall-Bladder Diseases .....	36
Gas Anesthesia .....	243
Gastric Hyperacidity: Its Recognition, Cause and Management .....	135
Gastric Ulcer, Studies on the Etiology of .....	442
Genitals of the Male, External, Accidental Injuries to .....	198
Goiter, Perfected Methods in the Operation for the Bad Risk Patient .....	537
Gonorrhea, A Plea for the More Conservative and Intelligent Treatment of .....	97

(Continued on page 614)

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Gonorrhea in Women, Acute—Diagnosis and Treatment of .....	445
<b>H</b>	
Heart Block—Report of Cases .....	13
Heart Conditions in Childhood, Congenital and Acquired .....	156
Heart, Diseases of the .....	248
Hematuria, Its Significance to the General Practitioner .....	339
Hemorrhage of Ovarian Origin—Case Report .....	601
Hemotherapy—A New Method in the Treatment of Vomiting of Pregnancy .....	344
Honor Guest of the Next Annual Convention (Dr. Wm. D. Haggard) .....	453
Hyperacidity, Gastric—Its Recognition, Cause and Management .....	135
Hypertrophy of the Thymus Gland—Report of Cases .....	67
Hypertrophy, Prostatic .....	342
Hyperthyroidism: Low Respiratory Metabolic Rate .....	542
<b>I</b>	
Ileus, Acute—Peritonitis Complicated with .....	289
Impacted Ureteral Calculus—Case Report .....	253
Index to Volume XV .....	610
Infants Under One Year of Age—Artificial Feeding of .....	294
Infection, Oral Focal, Role and Rationale of .....	401
Infection, Oral Foci of .....	305
Injuries, Accidental, to the External Genitals of the Male .....	198
Injuries, Internal .....	92
Instrumentation and Operative Technique, With Post-Operative Results, of the Electro-Enucleating Tonsillotome .....	71
Internal Injuries .....	92
Intestinal Obstruction, Acute .....	287
Intrauterine Injection of Lipiodol as a Diagnostic Aid in Gynecology .....	551
Ischemic Paralysis (Volkman's Contracture) ....	599
<b>J</b>	
Jaw, Fractures of the Upper and Lower, and Their Correction with the Dental Splint .....	207
<b>K</b>	
Kidney, Tuberculosis of the .....	398
<b>L</b>	
Lambia Intestinalis, Diarrhea Caused by—With Report of Case .....	209
Lesions, Duodenal, Roentgen Observation of .....	129
Lipiodol, Intrauterine Injection as an Aid in Gynecology .....	551
Lung Cancer—With Report of Three Cases .....	83
<b>M</b>	
Meckel's Diverticulum, Some Surgical Diseases of ..	147
Mercism (Rumination) .....	31
<b>N</b>	
Nonsurgical Treatment of Infections of the Biliary Tract .....	74
Nutritional Needs to the Third Year .....	555
<b>O</b>	
Ophthalmology that Concern the General Practitioner, Some Phases of .....	388
Oral Focal Infection, Role and Rationale of .....	401
Oral Foci of Infection .....	305
Osgood-Schlatter's Disease—With Case Report ...	86
Otitis, External, A Study of .....	142
Otomycosis .....	347
<b>P</b>	
Paralysis, Ischemic (Volkman's Contracture) ....	599
Pellagra with Psychoses .....	299
Perfect Methods in the Operation for the Bad Risk Goiter Patient .....	537
Peritonitis Complicated with Acute Ileus .....	289
Physiotherapy an Adjunct to Modern Therapy ....	204
Pre- and Post-Natal Care .....	94
Pregnancy, Double, One in Utero and One in Right Tube .....	255

(Continued on page 616)

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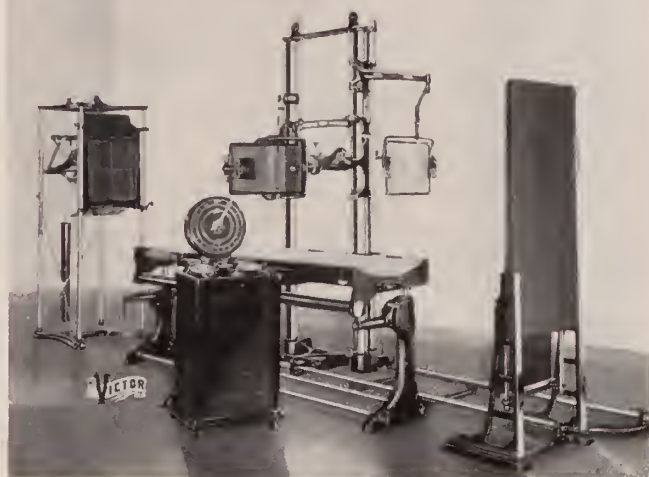
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ORGANIZATION



Pregnancy, Pyelitis of .....	385
President's Address .....	485
Presidents and Secretaries of the County Medical Societies .....	507
Proceedings of the Fifty-sixth Annual Meeting of the Florida Medical Association .....	488
Proceedings of the Tenth Annual Meeting of the Florida Railway Surgeons' Association .....	559
Program of Fifty-sixth Annual Meeting of the Florida Medical Association .....	450
Program of Tenth Annual Meeting of the Florida Railway Surgeons' Association .....	452
Prostatic Hypertrophy .....	342
Psychiatry, Normal Relations to the General Practice of Medicine and Surgery .....	256
Psychoneuroses .....	335
Psychoses in which There May Be Recovery .....	139
Pyelitis .....	151
Pyelitis of Pregnancy .....	385

## R

Record of the Examination of 255 Pre-School Children of Tampa .....	350
Reports of Councilors, Florida Medical Association .....	455
Roentgen Diagnosis of Injuries to the Vertebrae with Special Reference to the Lumbar Region .....	80
Roentgen Diagnosis of Pulmonary Tuberculosis .....	298
Roentgen Observation of Duodenal Lesions .....	129
Role and Rationale of Oral Focal Infection .....	401
Rumination or Merycism .....	31

## S

St. Augustine, the Next Meeting Place of the Florida Medical Association .....	447
Schedule of Meetings, Component Societies of Florida Medical Association .....	41, 263, 357, 415, 463, 609
Scleroderma, With Report and Presentation of Patient with a Generalized Type of Disease .....	241
Significance of Hematuria to the General Practitioner .....	339
Sinus Question, The .....	193
Skull, Fractures of .....	585
Spine, Fractures of .....	145
Statement of Ownership, Management, Circulation, etc. ....	606
State News Items: 39, 104, 162, 215, 261, 310, 353, 412, 460, 513, 559, 604	
Synergistic Analgesia in Labor .....	200
Syphilis Observed at the Florida State Hospital, A Resume of Six Hundred Cases .....	349

## T

Tannic Acid Treatment of Burns .....	597
Thoracic Aorta, Aneurism of .....	35
Thymus Gland, Hypertrophy of—Report of Cases ..	67
Total Cystectomy—Report of Case .....	439
Trench Mouth .....	251
Tuberculosis Abstracts .....	360, 416, 464, 516, 562, 606
Tuberculosis of the Kidney .....	398
Tuberculosis, Pulmonary, Roentgen Diagnosis of ..	298

## U

Ulcer, Duodenal, Surgical Treatment of .....	16
Ulcer, Gastric, Studies on the Etiology of .....	442
Ureteral Calculus, Impacted—Case Report .....	253
Urinary Tract, Modern Diagnosis of Diseases of ..	392
Uterine Fibroids Associated with Hemorrhage—Some Experiences in the Treatment with X-ray ..	254
Uterine Hemorrhage Without Gross Change in the Pelvic Organs .....	189

## V

Vertebrae, Roengen Diagnosis of Injuries to, with Special Reference to the Lumbar Region .....	80
Volkmann's Contracture (Ischemic Paralysis) .....	599
Vomiting of Pregnancy, Hemotherapy, A New Method in the Treatment of .....	344

## W

Wassermann Test, Some Observations on the .....	88
---	----

## X

X-Ray Treatment of Uterine Fibroids with Hemorrhage .....	254
---	-----

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## INDEX OF AUTHORS

Allen, Bundy	129
Anderson, James Martin	241
Andrews, L. L.	250
Baltzell, N. A.	597
Benton, G. H.	256
Bevis, W. M.	139
Beyer, A. R.	599
Bitzer, E. W.	13
Boling, John R.	78
Box, W. C.	248
Carlisle, James L.	344
Caraballo, C. J.	401
Cason, T. Z.	542
Chandler, G. E.	246
Coplan, Milton M.	97, 385
Cowell, E. H.	156
Cunningham, Lester W.	80, 298
Daves, F. E.	398
Davis, Julius C.	83
Day, H. A.	547
Douglas, A. F.	33
Fleming, S. Ward	86
Flipse, M. Jay	149
Gable, N. W.	347
Game, Joseph B., Jr.	305
Gilmer, E. S.	253
Gowdy, Ralph	16
Graves, J. Raymond	100
Haggard, William D.	537
Hall, John E.	302, 342
Hamner, George P.	74
Harkness, R. B.	198
Harris, Robert M.	335
Hay, I. M.	601
Herman, F. Peter	71
Holmes, Roy J.	97, 385
Hutson, Thomas W.	100
Ingram, L. C.	142
Inman, J. C., Jr.	349
Ives, A. C.	254
Jelks, Edward	145
Kirk, W. W.	21
Klussman, R. M.	151, 189
Little, A. D.	396
Lucinian, Joseph H.	35
McCaslan, W. H.	350
McDuffee, T. M.	255
McIver, Robert B.	439
Martin, Benjamin J.	204
Martin, L. W.	294
Masters, C. J.	212
Mease, J. A., Jr.	594
Mitchell, J. W.	251
Moreman, C. W.	207
Morton, A. O.	289
Oetjen, George Frederick	601
Orr, Louis	339
Osincup, G. S.	67
Panettiére, Cayetano	157
Peyton, Harry A.	24
Phillips, Kenneth	442
Pound, J. H.	299
Quillian, Warren	209
Reaves, J. U.	392
Repass, R. E.	193
Richardson, J. C.	92
Richardson, Shaler	388
Robinson, Leigh F.	147
Rowlett, W. M.	551
Shackelford, C. W.	445
Smith, Marvin	135
Spengler, N. L.	31
Thorpe, Franklin	200
Van Landingham, W. E.	94, 243
Watson, Herman	287
Wells, J. Ralston	585
Whitford, Grace	555
Wylie, LeRoy A.	36
Youmans, Iva C.	88

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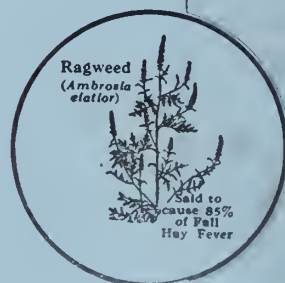
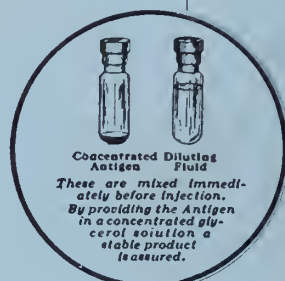
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